The Journal of the American Medical Association

VOL. XXXIV CHICAGO, ILLINOIS, JANUARY 20, 1900. No. 3.

Address.

INFLUENCE OF THE MEDICAL PRACTITIONER ON MEDICAL PROGRESS.

BY JOSEPH D. BRYANT, M.D.

NEW YORK CITY.

It may seem strange, in an atmosphere as dense as is this of ours with medical phrase, that I choose to address you on any topic of medical education. But surely there can be no sentiment so dominant here as this one, except, let us hope, that of love for those for whose happiness we are responsible, and for Him to whom we owe the privilege of existence.

Medical education is commonly understood to mean the education gained from attendance at medical schools, rather than that born of the conscientious thought and labor of medical practice. Possibly it would be better if no mention were made at this time of medical schools as factors in medical attainment, as then the attention would be directed more definitely to the main object in view—the practice of medicine and of manly attributes as the means of the establishment of medical advance. A marked distinction should be made between these two means of medical attainment, the same, in fact, as is made between the engineering integrity of an underlying support in architecture and the symmetry and gravity of the burden that it sustains. The importance which this and kindred societies hold in the field of labor and advance is hardly realized unless it be made the subject of special thought.

The real significance of the labors of organized bodies of medical men rests in the outcome for the benefit of others, derived from wisely conducted interchange of ideas, based on an intelligent experience, and supplemented, but not submerged, by the goodfellowship begotten of a mutual participation in unceasing war waged against an insidious, tireless and finally successful foe—disease—and its dread sequel—death. The beginning of medical knowledge was coincident with the outcome of the first effort for the relief of suffering presumptively of the human kind. The first effort was the beacon of experience, and with the ending of the effort experience began. The germ of medical education had its birth at this time, and Experience attended at the delivery, and the importance of the harvest was determined by the degree of appreciation of the result by all concerned, but more especially on the part of the quasi-medical attendant.

Thus we find that the initial units of medical endeavor and that of medical experience and of medical education were born almost simultaneously, and thereby was founded a new world of labor and experience, and established, I think we may say, the world's trinity of physical well-being, a trinity charged with the material welfare of human beings, and next in significance to the Great Trinity controlling their spiritual comfort and security. These primal results were the products of the efforts, perhaps of but a single individual, or, at all events, of individuals acting with spontaneous desires for the accomplishment of a similar purpose, the securement of the physical comfort and welfare of human animation. However this may have been, the result was the same, as no established advance in methods of relief could have taken place except as the outcome of a conference of the participants, in which the experiences of each were combined for the betterment of the methods of all.

Medical endeavor, and therefore medical knowledge, are the direct products of the sympathetic efforts bestowed by our kind for the relief of the injuries arising because of the contentious nature of our earlier ancestry. Sympathizing friends and fellow-soldiers attended to each other's hurts at that time, employing simple waters and common herbs for their purpose. No thought of vulgar recompense or of venal plan entered into the proposition nor followed successful efforts of relief. The act was not entirely foreign to that of the brute of to-day, who patiently licks the wounds of his kind. There can be no record of the first case thus treated, since its antiquity is coincident almost with creation itself and with the endowment of God's creatures, from birds to man, with the emotion of sympathy, a sentiment the handmaid of need, and wisely bestowed on all forms of animated creation possessed of the emotions of jealousy and anger.

Although sympathetic friends and comrades planted the first seeds of medical attainment, the germination and growth thereof were hastened by the further efforts of those who, stimulated by primary success or prompted by generous impulse, regarded themselves as specially fitted for the art of healing their kind. And if, perchance, any one of them was possessed of special knowledge—empirical, of course—of the effects of remedies, then indeed was he the most bountifully equipped for the labor, and correspondingly respected in his sphere.

In this manner the treatment of tangible afflictions, usually the result of injuries, was carried on. However, the unaccountable presence of internal disease, and especially the bewildering characteristics of epidemics, clothed their appearance with the garb of the supernatural, when the wisest men of the times, the priests, then accredited with a special knowledge of strange, supernatural and subtle agencies, were consulted. It is recorded that the priests by their prayers and exorcisms instilled hope into the afflicted, and in many instances effected apparently marvelous cures. How strange the fact that in this day of boasted intelligence similar methods of treatment should clasp hands and greet familiarly those heading the chapters of the earliest history of human events. The so-called Christian therapeutics of to-day are more anomalous than were those of the earliest periods of our race. However, during that time, the invocations of the priests in behalf of their

*Delivered before the N. Y. State Medical Association, New York City, 1899.

patients were not always followed by relief, and finally, fearing the effects of the loss of reputation, the uses of diet and drugs were called to their aid. Hence, we owe to the priests of that time our first knowledge of the beneficent effect of diet and of the internal administration of drugs. To them also belongs the credit of much of the systematized beginning of the study and treatment of disease.

The healing art, as fostered and practiced by the priests of India, achieved noted triumphs thousands of years ago. The Vedas, the oldest literature of the Indians, a part of Sanscrit lore, give information concerning the training of doctors. At this time Charaka gave not only advice to the young regarding their proper fitting for the practice of medicine, but added that which concerns us the more to-day, the best means of imparting medical knowledge. He stated that the study of medical writings, the personal teaching of medical instructors and association with other physicians, were the best means of acquiring a knowledge of medicine. He expressed himself also wisely when he added the following advice: "The man who has nothing but a theoretical training and is unskilled in the details of treatment, knows not what to do when he comes to a patient and behaves himself as pitiably as a coward on the battlefield. On the other hand, a doctor who is only practical does not win the esteem of the best men." These words, written more than two thousand five hundred years ago, are of greater relevancy at this day of advance and opportunity than at the time of their utterance. They speak not only of the wise forethought of their author, but also of the unchangeable interdependency in all fields of attempt between preparation and action,and in this of ours between theory and practice.

If the attention be now directed but briefly to the records of Egypt, we find in this storehouse of ancient civilization evidences of much earlier and greater attainments in medicine and surgery than in India. In fact, in Egypt one finds evidences of prehistoric surgery, therefore, as yet of unmeasured antiquity so far as time record is concerned. However, the fact of their existence denotes the presence in their time of the fellow sympathy that prompted the efforts of relief. The papyrus Ebers, written 1552 years B. C., is a compilation of remedies and of the methods of treatment of disease, some of which are described as being ancient even at that period. It appears, too, that the Egyptians had given to anatomy a systematic consideration—of its kind—so long ago as 5241 years B. C.

Accounts of the established existence of medicine and surgery and of their application to the suffering, are noted in the pages of the Holy Writ. It is recorded of King Asa, who, "in his disease sought not to the Lord but to the physicians. And Asa slept with his fathers." Whether or not this ancient utterance was then intended to express the sarcasm that often prompts its modern recital, I will not attempt to indicate.

Another instance may be properly quoted. "And if men strive together and one smites another with a stone or with his fist and he dies not . . . then shall he that smote him pay for the loss of his time and shall cause him to be thoroughly healed." In other and in modern practical expression, he shall forfeit damages and pay the doctor's bill! Surely this is an illustration of altruistic character, and better fitted to our sense of appreciation than is the preceding one.

The familiar and oft-quoted experience of the good Samaritan and the beneficent effects of his applications to the sufferer by the wayside speak like of the benefits of materialistic and of sympathetic therapeutics. The dual associations of medicine and surgery, of suffering and pity, and of physical distress and human compassion, are of an antiquity co-equal with that of the application of human reason to the woes of physical and mental misfortune.

Thus it is apparent that human sympathy first prompted medical effort; that human sympathy and special fitness established the beginning of medical practice; that religion headed the outcome, adopted and fostered the practice, and because of the erudition of its exponents recorded the results, thus laying a foundation for medical scientific effort. With the records of experience well kept and of ever increasing importance, the steps to organized medical instruction, singly imparted by mentor to pupil, or through the combined efforts of the adherents of the peculiar school of the time, were promptly taken.

Medicine was soon divorced from religion, and then practiced as an independent profession with great repute, especially in Egypt, where it took rank equal to that of the priestly one. The schools of medicine of the earliest times were not constituted as at the present. They were of an hereditary organization, sustained by the wisdom of the accumulated records of the experience of the forefathers, falling to the sons, who likewise added their experience and passed them along for the information of and amplification by their offspring, the next generation of physicians. The famous so-called schools of Cnidos and Cos were thus established and perpetuated. Hippocrates received his early education at the latter school. Surely, this plan of education constituted proprietary instruction in the strictest sense of the term. Soon physicians could gain their professional education in the temples along with those engaged in the attainment of the other learned professions, such as religion, law, mathematics and astronomy. Here we note the beginning of the university system of education of the present time.

But enough has been said already, it seems to me, to show conclusively the fact that medical education, at least up to the time of the development of physiology, chemistry, pathology and the still later co-ordinate branches of medical science, owed not only its birth but also its upbringing and final firm establishment to the value and perpetuation of the personal experiences of the crude medical endeavor of the first half of the recorded centuries of human existence.

The thirst for medical knowledge has extended from its points of inception in divers directions and in ever expanding circles, along the lines of intelligent appreciation and human sympathy, interrupted now and then for a time by the exigencies of national conflict or decay, and by individual complacency or contention, to the present time, bearing an ever increasing resemblance to that familiar picture painted on the placid surface of the lake by a falling pebble, as expressed by Pope:

> The small pebble stirs the peaceful lake,
> The circle round, a circle straight succeeds,
> Another still, and still another spreads.

The advent of newer methods of observation, based on the application to medical research of the advances in collateral things, and the greater acumen, the product of increased opportunity and appreciation, rapidly supplanted the assumption of empiricism with the rational conclusions of unerring scientific investigation. The hidden mysteries of the heretofore subtle agencies of disease are now being rapidly solved by the application to their presence of Nature's similar agencies.

The previous conflicts waged by man against disease in self-defense, are now changed to the substantial victories of aggressive action. Terror, woe and sadness, the heritages of earlier disease devastations, are supplanted by confidence, joy and gladness—confidence in the power of man to prevent, joy in the realization of the outcome, and gladness in the knowledge that misery and death are being pushed apace to the rear. Man's relation to the earthly order of things forbids that this conflict shall cease or that he shall be victorious. Nor need we hope for any change in this regard until, perhaps, the discovery and isolation of the bacillus of old age shall establish a rivalry between human longevity and infinite time.

The facts of substantial merit that have thus far been attained in the field of medical endeavor are the accumulated product of the efforts of those who have engaged in the practice or the study of medicine. The practice of medicine has achieved the more because it has demonstrated not only the trustworthiness of its own dogmas, but also the soundness of the faith of the student. In view of these facts, it requires no emphasis of statement to remind you of the importance of your own individual efforts in these matters, nor of the fruit thus far borne by those of our antecedents, who were prompted in their striving rather more to do good, than to gain riches or favor.

As already stated regarding the significance of an organized body of medical men, it relates not only to the scientific combat of disease, but to the cultivation of that sentiment of goodfellowship which gains firmest root in the breasts of companions in arms. A numerous, able and well-trained membership, possessed of proper *esprit*, is as essential to the successful conduct of a medical, as of a military organization. The success and standing attending the efforts of organized professional or business action depends entirely on the measure and character of the labor performed. The relation of these characteristics to each other should be mutual and interdependent, thus producing the maximum amount of high attainment. Those who have had special experience in a given line of action or of thought, and are known to be careful and conscientious observers, and equally careful and conscientious in the statement of facts, should be encouraged when needful, and secured when feasible, to express their well considered knowledge through the channels of established organization. On all such occasions as these the luster of personal attainment is shed through and upon the channels of its utterance.

The sacrifice of time in pointless discussion is pernicious, as it constitutes not only an abuse of opportunity and intelligence, but fosters romance and ostentation. No one is wise enough to speak profitably, without preparation, on a topic thoroughly presented, unless it be one of special interest to himself. Therefore, the reputation of all and the station and dignity of professions, demand that the participants in discussion shall be fitted by experience and preparation to consider the subjects on trial. Any other course than this dilutes facts with fancy, and unmans emphasis with puerility. Discussion conducted solely along the lines of friendly acquiescence or of gracious complacency, is the better suited to the graces of a feminine tea than to stern duty of combating disease, or of surmounting the difficulties of human opposition or those of Nature's bequests.

Scientific papers should emanate from sources which can add something to the store of knowledge, something that refutes or verifies an old, or that proposes or sustains a new, proposition. The presentation of a dissertation only because invited to do so, or for any other reason or excuse, in the absence of the possession of facts of importance, is making a convenience of other people's desires and perpetuating the display of personal vanity. In other words, the successful outcome of the discussion on an important topic requires that the participants be afforded the time and opportunity to enable them to express concise, intelligent and up-to-date facts and opinions regarding it.

The adoption of measures of this kind in connection with the consideration of living topics of common or of special interest, produces vitalized definite products. Any other course is one likely to refresh the memories with moribund facts at the expense of greater opportunities. Mann said: "Every addition to true knowledge is an addition to human power." It may be said with equal force, misguided efforts rob human possibility of important opportunities. The proper *esprit* is essential to success in every undertaking. Neither individual nor organized effort can attain the eminence of true merit without persistent labor for the common purpose. The domination of the church in general affairs and in medicine during much of its past history demonstrates forcibly the power of *esprit de corps* in the attainment of successful determinations.

The principles of action which lead to the success of individual effort apply with equal force to that of organized numbers in their efforts. And, by the same token, the creations of those animated only by effeminate complacency, are as unstable and unabiding as are images of sand. It is well in all instances of individual construction for common purposes to recall the wise saying: "No chain is stronger than its weakest link." The being enrolled in the support of a cause, or the maintenance of a purpose, medical or otherwise, constitutes a visible asset of the endeavor, but the fact alone that assets are present, even in ponderous dimensions, does not establish the success nor maintain the worth of the outcome of effort. The question is, are the assets available, are they productive, are their products of high comparative value, and how are they esteemed in the open markets of exchange of the professional and business worlds?

In the event of failure of high appreciation of the products of one's labor, it is then both becoming and wise to pause and ascertain the reasons of the failure, and in doing so it should not be forgotten that the admission of defeat or of the liability of it, constitutes the strongest incentive to the accomplishment of a purpose. A nature possessed of a kind of courage that impels one frankly to admit a fault, to acknowledge a failure or to confess ignorance will not submit to abasement. The same courageous manhood that commanded the acknowledgement will quickly lead to victory. It is not in the natural order of things that the worth of the contributions to human welfare and advancement of a person or an aggregation of persons, shall eclipse the good that follows in the same realm of endeavor, of all other of mankind. These contributions at the best can but point the way, and in so doing the beacon of experience serves as a guide of light to the greater and broader attainment of those who follow. A profession having in charge the physical welfare and comfort of human beings contributes very much indeed to the happiness and prosperity of the people. No adequate means of estimating the worth of these services has yet been determined, nor will it ever be known. Although the influences of environment, of custom and of demand regulate the standard of vulgar remuneration, there can be no true measure placed on the

sentimental, social and scientific outcome of medical care. How important then it is that those who devote their lives sincerely to the fulfilment of so sacred a trust, shall shun the pitfalls of venal practices, and of all contentions in which the public has no sympathy and which are antagonistic to the sacred precept: "As ye would that men should do to you, do ye also to them."

It seems to have been ordained as a duty that each shall labor faithfully for the welfare of others, and as an earnest of which we are commanded, "Thou shalt love thy neighbor as thyself." If the product of any human effort whatsoever be available to meet the wise needs of comfort or thrift, then surely has their author, dutifully or not, added something to the beneficent contents of the storehouse of well-being. Impotent indeed is he who has neither the opportunity, the ability, nor the inclination to contribute anything for the betterment of those around him, nor to the advancement of a cause of which he is a part. Fortunately nothing in this world is made in vain; nothing is lost. And although the good that one does may live after him, his ashes and those of the worthless serve alike to fit the soil for, we hope, a fruit of higher development.

Let us briefly measure our time, as members of this Association, with that of those who made it possible for each of us to regard himself as a reputable member of an honorable profession. The sympathy that stimulated the first efforts of relief is far more potent to-day than during the midnight era of unrecorded time. The means of the attainment of knowledge are now prolific and ever increasing. The ignorance, the contention and the bigotry which dwarfed and suppressed advance in earlier time are now supplanted by established learning, by honest debate and by thoughtful appreciation. Are we fully cognizant of the bountiful age in which we are living; and are we doing our parts as individuals and as an organization in a manner best intended to meet the approbation of those whom we now serve and those who are to follow?

It may not be amiss if each of us pause occasionally in our life's labor and indulge in introspection, inquiring: Can I not add yet more than I am now doing to the medical armamentarium for promoting human comfort and longevity? Are the intellectual products of my opportunities amply dedicated to the services of general human relief, or are they too often perverted to the advantages of individual gain? In other words, am I practising medicine as a consistent member of an honorable profession, or as a thrifty agent exploiting a business proposition? Is the sympathy which gave birth to my profession as keen and unselfish in my enlightened breast as in the breast of the pagan of the earlier time? Meditations of this character are healthy, mental exercises, and will beget promptings which, if heeded, will increase self-respect and exalt the profession of our choice. Those of us who for any reason are unable to contribute to the store of knowledge should be earnest in the determination to meet the demands of duty along other channels of human requirements, cheering ourselves with the thought that,

> Knowledge is the hill that few may hope to climb.
> Duty is the path that all may tread.

Aloes in Varicose Ulcers.

After the ulcer has been freed from pus by sublimate, horizontal position and elastic compression, it has been Coffin's experience (*Journ. des Mal. Cut.*, August, 1899) that lightly moistening the surface with tincture of aloes will heal it up rapidly.

Original Articles.

SURGICAL TREATMENT OF PERFORATION OF THE BOWEL IN TYPHOID FEVER.*

WITH A TABLE OF 158 CASES.

BY W. W. KEEN, M.D., LL.D.
PHILADELPHIA.

In the brief limits allowed to this paper, among so many others, it is impossible to discuss more than the treatment of perforation of the bowel in typhoid fever. The diagnosis of this serious complication, which is equally, if not more, important, must, unfortunately, be omitted. What I have to say may, perhaps, be best stated in answer to four questions.

1. *Shall we operate at all?* This question can now be answered absolutely in the affirmative. Thirteen years ago, when Prof. James C. Wilson and I first discussed the advisability of operation in a case of apparent typhoid perforation, not a single case had been operated on in America, and only one in Europe, by Mikulicz, and of this we were ignorant. Then, the question was debatable; now, experience has given us a positive solution.

In my book on the "Surgical Complications and Sequels of Typhoid Fever," published early in 1898, I published a table by Dr. Thompson S. Westcott, in which he collected for me 83 cases of operation, of which 67 died and 16 recovered, a recovery rate of 19.3 per cent. Appended to this paper is a continuation of that table up to the present time, compiled by Dr. Martin B. Tinker, containing 75 additional cases, of which 54 died and 21 recovered[1], a recovery rate of 28 per cent., a gain over the rate of the first 83 cases of over 40 per cent. The recovery rate of the entire 158 cases is 23.41 per cent. The list includes cases operated on many hours and often many days after perforation presumably took place. If all physicians were alive to the fact that the healing process after operation during typhoid progresses just as well as if there were no typhoid and were alive to the good results of operation, and especially if they called the surgeon promptly, I do not doubt in the least that the recovery rate would be 30 per cent., or possibly even one in three. Twenty-eight per cent. is within hailing distance. In somber contrast to this is the estimate of Murchison, that the recovery rate in unoperated cases is only 5 per cent., and Fitz states that 83.4 per cent. die within the first week, 37.3 per cent. even within the first day.

The papers of Cushing and Finney and my book in America, and the papers of Platt, of Monod and Vanverts, and of Gesselewitsch and Wanach in Great Britain, France and Russia, respectively, have, evidently, borne good fruit.[2] From 1884, when the first operation was done, to January, 1898, 14 years, only 83 cases were reported. Two years have added 75—158 in all. Of the whole number, 97 are reported by American surgeons—including Canada—21 by British and 15 by Russian surgeons.

2. *In what cases shall we operate?* To this I would

*Read in the discussion on Typhoid Fever, at the meeting of the N. Y. State Medical Association, held in New York City, Oct. 25-26, 1899. A number of cases have been added since the paper was read.

[1] I count Case 95 as an operative recovery. Possibly Case 154, which survived nine days, might be so classed, but to be on the safe side I classed it as a death.

[2] References to these papers will be found in the table of cases. I must express my obligations to Dr. Finney for advance sheets of a paper on the same subject, soon to appear in the Johns Hopkins Hospital Reports, vol. viii.

answer, practically every case of perforation, unless the condition is such that recovery is evidently hopeless. The better the general condition, the better the prospect of cure, and perforation occurs quite as often in mild cases as in severe, and possibly even more frequently. One case was operated on twice (87) with a fatal result; one case (90) three times, and yet recovered. The operation has been followed, as is possible after any abdominal section, by intestinal obstruction. Cushing's case (90) and Finney's (107) were operated on for such a post-operative obstruction, and both recovered. C. B. Porter's patient (132) died of an unrelieved obstruction; possibly a second operation might have averted death. Finney's remarkable one (68) of seven later complications, yet happily resulting in recovery, encourages us never to despair.

No *age* is a barrier, yet, as the subjoined table—derived from the entire series of 158 cases—shows, age apparently has considerable influence on the recovery rate:

TABLE OF RECOVERIES AND DEATHS WITH REFERENCE TO AGE.

Age.	Recovered.	Died.	Recovery Per cent.
Under 15	7	6	53.84
15 to 25	4	39	9.30
26 to 35	10	33	23.26
Over 35	6	14	30

This shows that from 15 to 25 is the most unfavorable time to operate, while the most favorable are over 35, and especially under 15.

Again, *sex* seems to have considerable influence on the mortality rate, so far as can be judged from 158 cases. In my table the sex is mentioned in 125 cases, of which 106 were males and 19 females—84.8 per cent. of males. This preponderance of males would be even greater were military and naval surgeons alive to the possibilities of saving life in this perilous condition. I have been informed of a considerable number of such cases dying without operation during our late war with Spain. Of the males 85 died and 21 recovered, a recovery rate of 18.1; 11 females died and 8 recovered, a recovery rate of 42.1 per cent. In other words, while the number of operations in males has been over five times as many as in females, the recovery rate of females has been over twice that of males.

Again, I have analyzed the recovery rate in the various *weeks of the disease.* The third week gives, as is well known, the largest number of cases of perforation, the second following close upon it. As is seen by the subjoined table, the mortality rate of these two weeks is by far the worst, yet even these two weeks yield a recovery rate of over 16 per cent., more than three times that of unoperated cases, and in the fourth week this recovery rate is doubled.

TABLE OF RECOVERIES AND DEATHS WITH REFERENCE TO THE WEEK OF THE FEVER.

	Recovered.	Died.	Recovery per cent.
First week	2	1	
Second week	5	22	18.57
Third week	8	42	16
Fourth week	4	8	33.3
Fifth week	1	5	
Sixth week	14	2	
Seventh week	2	3	
Eighth week		1	
Ninth week		1	
Eleventh week	1		

The numbers in other weeks, not rated, are too small to make the percentages of value.

3. *When shall we operate?* Next to the first question, which I regard as settled, this is the most important to be considered. As exception has been taken, especially by Cushing and Taylor, to my views as set forth in my book, I may be permitted to quote precisely what I wrote: "First, the time of operation should be wisely chosen. The best time is not during the immediate primary shock which lasts during the first few hours. Happily, in fact, it is very rarely the case that operation can be done within several hours after perforation, since, the case being under the care of a physician, it requires time to obtain a consultation with the surgeon, and, when the diagnosis has been reached, still further time must elapse before suitable preparations for operation can be made. The table on page 227 [of my book] shows that the *second twelve hours after perforation, all things considered, has been the most favorable up to this time.* Abbe well says that it is essential that 'the surgeon should never be so hasty in getting at his work that he enters upon it handicapped by poor assistants, poor light, poor arrangements for irrigation and sponging, or inadequate plans for restoration from shock.' *The earlier the moment at which the operation can be done after the immediate shock of the perforation, provided, of course, there has been any, as is sometimes not the case, the better it will be for the patient. Every hour then counts, since the infection of the peritoneum becomes more diffuse and more intense*[3]."

Looking carefully at what I said, it is hardly just, it seems to me, for Cushing to say: "it is hard to understand Dr. Keen's advocating delay until symptoms of shock have passed away and *his preference of the second twelve hours* for operating, when one appreciates that extravasation, perhaps of virulent organisms, is with all probability continually taking place while we are waiting." Taylor says: "I believe, to be successful, the abdomen should be opened at the earliest possible moment after the diagnosis is made and that no delay whatever should be permitted for reaction, or, indeed, for any purpose whatever," and again, "I do not believe it wise to wait for reaction, as Dr. Keen suggests, for the shock and lowered temperature is due to the large amount of septic material in the abdominal cavity and to the resulting purulent peritonitis, and not to the shock of perforation of the bowel. The fact that the greatest number of recoveries occurred when the operations have been performed within the second twelve hours only carries out this contention. They are, as a rule, the cases where the perforation is small and the onset of the peritonitis slow."

I think that what I wrote may be fairly summarized in two rules: 1, operation should be done as soon as possible after perforation; 2, but no prudent surgeon would operate in perforation any more than in any other condition during profound shock. I did not state that I "*preferred* the second twelve hours," but only that "*all things considered,* this has been the most favorable *up to this time.*"

Let us appeal again to the facts. In the subjoined table I have made a more minute analysis of the influence of the time of operation on the rate of recovery than in my book, and, on consulting it, we see that the recovery rate in the first four hours is 25 per cent.; from four to eight hours, 8.33 per cent.; and for all cases operated on within the first eight hours the average is 15 per cent. In the third four hours, from eight to twelve, the recovery rate is 25 per cent., which is still below the recovery rate of operations done from eight to twenty-

[3] The italics are used here to call attention to my position.

TABLE OF 158 CASES OF OPERATION FOR PERFORATION IN TYPHOID FEVER, PREPARED BY DR. MARTIN B. TINKER.[5]

No.	Operator and reference.	Age and sex.	Location and character of lesion.	Day of the disease.	Interval between perforation and operation.	Operation.	Result.	Remarks.
84	Abbe, R. Personal communication.	M. 29	Two perforations of ileum; one 8 in. from ileo-cecal valve; the other 14 in. from valve.	During 2nd week of a relapse.	7 hours.	Median celiotomy; abdominal cavity filled with greenish turbid extravasation and all small intestine injected; suture of openings; saline irrigation; glass drainage tube into pelvis. Upper opening in bowel reopened and stitched into wound with rubber tube draining it for relief of intestinal contents.	D	Patient a soldier from Cuba, exhausted by long camp illness and hardships. Died 11 hours after operation.
85	Abbe, R. Personal communication.	M. 30	Perforation 1½ feet from ileo-cecal valve.	Typho-malarial fever for 8 wks.	12 hours.	Abdominal cavity fouled by intestinal contents and general peritonitis; suture of perforation; irrigation: drainage from pelvis by glass tube and gauze.	D after 3½ days.	Patient a soldier from Cuba, exhausted before operation. Died 3½ days after operation.
86	Anderson, A. R. Handford & Anderson, Brit. M. J., 1898, ii, 220.	M. 27	Within 3 feet of cecum; hole size of a bean.	Probably 33d day.	22½ hours.	Incision 4 inches long below umbilicus in median line; gas and feculent matter escaped; intestines congested and covered with lymph; perforation closed with silk Lembert sutures; intestine pulled out loop by loop and wiped with sponges saturated in biniodid sol. 1:2000; abdomen closed without drainage.	R	Renal complications delayed recovery. Wound healed several weeks at time of report.
87	Beach. Fitz & Beach, Boston Med. and Surg. Jour., 1898, cxxxix, 389.	M. 15	Short distance from cecum.	During 3d week.	. . . . .	Incision 8 inches in median line; escape of gas and fecal fluid; flakes of fibrin on intestines; feces pouring from ulcer which was closed by Lembert sutures at right angles to axis of intestine; flushing with hot boiled water; hot salt solution left in abdomen, which was closed without drainage; operation lasted 30 minutes; 8 days later reopened wound, evacuated pint of fecal fluid coming from ulcer near cecum; closed perforation with Lembert sutures; flushed with hot water; gauze drainage.	D	Condition fair after first operation; then several bloody stools; stitch abscesses. At 2nd operation former suture found in good condition; gradually failed and died same afternoon. Necropsy showed large necrotic area in cecum, many ulcers lower 3 feet of ileum.
88	Beckett, W. W. So. California Prac., 1899, xiv, 111.	F. 22	Loop of small intestine in Douglas cul-de-sac; opening small.	22d day.	24 hours.	Abdominal cavity distended with gas; general peritonitis; perforation closed with Lembert sutures; flushing with normal salt solution; gauze drainage.	D	Death from general peritonitis 24 hours after the operation.
89	Bigger, E. C., and Campbell, R. Brit. Med. Jour., 1899, i, 89.	M. 36	Two feet from cecum, ½ inch from mesenteric attachment; about size of a pea.	About first of 3d week.	10½ hours.	On opening abdomen gas and yellowish fluid escaped; intestines injected and covered with patches of lymph; perforation closed with 2 rows Lembert sutures; coils of intestine and pelvis sponged clean; irrigation with boiled water; glass drainage tube from lower part of abdomen.	D	Died during 4th day after operation.
90	Cushing, H. W. Johns Hopkins Bull., 1898, ix, 267.	M. 9	Two operations; first, perforation about 2 mm. in diameter; about 25 cm. from cecum in free surface of bowel; 2nd, perforation few cm. beyond first perforation; thinned Peyer's patches seen at first operation.	1st perforation end of 2nd week; 2nd perforation 14 days later.	4 hours.	1st operation. Median laparotomy below umbilicus: sero-purulent fluid in peritoneal cavity; serosa injected, particularly in right iliac fossa; fibrinous deposit in ileum; feces flowing from perforation, which was closed by circular suture, fine silk; irrigation with salt solution; gauze drainage. Second laparotomy 12 days later; no cause for symptoms of apparent perforation found; closure with drainage. Third laparotomy 2 days later for intestinal obstruction; no peritonitis; obstruction from kink in adherent omentum; second perforation at site of kink found and sutured with single purse-string suture of fine silk; gauze drainage. Operation lasted 20 minutes.	R	Patient rallied well after first operation but fecal fistula developed on 2nd day; discharged for few days. After 2nd operation condition not materially affected. After 3d operation, distention, peristaltic cramps, serious condition; typical typhoidal condition for 10 days, convalescence tedious; abscesses over back and shoulders incised; broke down and slow healing, but ultimate recovery.
91	Cushing, H. W. Johns Hopkins Bull., 1898, ix, 267.	M. 18	First loop of ileum 3 large ragged holes about 1.5 cm. in diameter.	Fifth week.	Probably 36 hours or more (personal).	Cocain anesthesia; incision through right linea semilunaris; rush of gas followed by escape of stinking fluid like pea-soup stools; bowels bluish, distended, covered with lymph and fecal extravasation; suture of perforations with Halsted matress sutures; cleansing abdominal cavity and irrigation with salt solution; drainage of pelvis and at seat of suture.	D	Rallied somewhat under stimulants and salt infusion but died 4 hours later.
92	Cushing, H. W. Johns Hopkins Bull., 1898, ix, 267.	M. 31	About 10 cm. above cecum.	Fourth week after prolonged abdominal symptoms.	Possibly 24 hours (personal).	Incision through right rectus; escape of gas and sero-purulent fluid on opening abdomen; serosa injected, ileum distended and covered with fibrinous lymph; perforation and thin patch turned in with Halsted sutures; wiping, irrigating, drainage of pelvis and site of suture. Operation lasted 30 minutes.	D	Stood operation fairly well, but died 8 hours later, apparently of acute general toxemia.
93	Cushing, H. W. Personal.	M. 25	8 inches (20.4 cm.) above cecum.	. . . . .	5½ hours.	Perforation and two thin Peyer's patches inverted and sutured; operation under cocain anesthesia.	D	General peritonitis; death 3 days later second operation.
94	Cutler, E. G. & J. W. Eliot, Per. Med. Rec., 517, Mass. Hosp. Rec.[6]	M. 19	Ileum 4 feet above cecum.	Last of 2nd or beginning of 3d week.	4 hours.	On opening abdomen considerable slightly cloudy serous fluid in abdominal cavity; some serous flakes on intestines; gut folded longitudinally and sutured by two rows of Lembert sutures; small wick of gauze.	R	Relapse of fever 7th day after operation lasting about 16 days; good recovery, man now perfectly well.
95	Dalton. Med. Rev., St. Louis, 1898, xxxvii, 392. Proceedings of the St. Louis Med. Soc.	. . . .	. . . . .	14th or 15th day.	. . . . .	. . . . .	R [6]	Urgent symptoms (collapse, pain, rapid pulse, etc.), disappeared after operation; patient had regular course of typhoid fever and died from the fever on 34th day. Necropsy showed wound nicely healed.
96	Dalton. Med. Rev., St. Louis, 1898, xxxvii, 392. Proceedings of the St. Louis Med. Soc.	. . . .	2 perforations 6 or 8 inches above ileo cecal valve and 2 feet above.	. . . . .	. . . . .	Perforation nearest ileo-cecal valve was closed; second perforation overlooked.	D	Died from shock; second perforation found at necropsy.

[5] Cases 1 to 83 will be found in my book on "The Surgical Complications and Sequels of Typhoid Fever," Philadelphia, 1898. The following remarks as to cases in the additional table may be proper: No. 95 is marked as a recovery, as he recovered from the operation and died on the thirty-fourth day from the fever. Nos. 111, 113, 114, 115, 140, 141 and 143 are only of value as determining the recovery rate. Nos. 118, 153 and 155, though somewhat doubtful, are reasonably certain to have been cases of typhoid perforation.

[6] To be published in Boston Medical and Surgical Journal.

[a] Cases 1 to 83 will be found in my book on "The Surgical Complications and Sequels of Typhoid Fever," Philadelphia, 1898. The following remarks as to cases in the additional table may be proper: No. 95 is marked as a recovery, as he recovered from the operation and died on the thirty-fourth day from the fever. Nos. 111, 113, 114, 115, 140, 141 and 143 are only of value as determining the recovery rate. Nos. 118, 153 and 155, though somewhat doubtful, are reasonably certain to have been cases of typhoid perforation.

[b] To be published in Boston Medical and Surgical Journal.

No.	Operator and reference.	Age and sex.	Location and character of ileum.	Day of the disease.	Interval between perforation and operation.	Operation.	Result.	Remarks.
97	Dalziel, T. K. Personal to Prof. Wm. Osler. Courtesy of Prof. J. M. T. Finney of Johns Hopkins University.	. . . .	. . . . .	. . . . .	26 hours.	Median incision; irrigation of peritoneal cavity; parts gently dried; drainage.	D	In extremis at time of operation.
98	Dalziel, T. K. Personal to Prof. Wm. Osler. Courtesy of Prof. J. M. T. Finney of Johns Hopkins University.	. . . .	. . . . .	. . . . .	. . . . .	Median incision; irrigation of peritoneal cavity; parts gently dried; drainage.	D	In extremis at time of operation.
99	Dalziel, T. K. Personal to Prof. Wm. Osler. Courtesy of Prof. J. M. T Finney of Johns Hopkins University.	M. 24	3 perforations, in last 18 inches of bowel; general plastic effusion.	End of 2nd week.	16 hours.	Median incision; irrigation of peritoneal cavity; parts gently dried; drainage.	D	
100	Dalziel, T. K. Personal to Prof. Wm. Osler. Courtesy of Prof. J. M. T. Finney of Johns Hopkins University.	M. 16	. . . . .	End of 2nd week.	13 hours.	Median incision; irrigation of peritoneal cavity; parts gently dried; drainage.	D	Would probably have had a good chance but for hemorrhage the day after operation.
101	Dalziel, T. K. Personal to Prof. Wm. Osler. Courtesy of Prof, J. M. T. Finney of Johns Hopkins University.	. . . .	. . . . .	. . . . .	36 hours.	Median incision; irrigation of peritoneal cavity; parts gently dried; drainage.	D	In extremis at time of operation.
102	Dalziel, T. K. Personal to Prof. Wm. Osler. Courtesy of Prof. J. M. T. Finney of Johns Hopkins University.	F. 13	. . . . .	Probably in 4th week.	11 hours.	Median incision; irrigation of peritoneal cavity; parts gently dried; drainage.	R	Mild attack, condition good; day after operation felt well and complained of hunger; wound sound on 16th day, except where drainage tubes removed; general condition excellent.
103	Deaver, J. B. Transactions Col. Phys., Phila., 1898, 3 s., xx, 9.	M. 27	Not located.	About middle or end of second week.	Perforation took place after dinner Operation next morning; probably 12-18 hrs.	Free gas and pus, on opening abdomen; appendix congested and removed; no attempt to locate perforation; thorough irrigation and drainage.	R	Second attack of typhoid; diagnosis confirmed by Widal reaction; first attack 10 yrs. before. Fever ran typical severe course; several hemorrhages; ulceration of appendix.
104	Deaver, H. C. Transactions Col. Phys., Phila., 1898, 3 s., xx, 9. Report by J. B. Deaver.	M. 36	Pin-hole perforation in ileum.	In the 3rd week.	36 hours.	Pus found in peritoneal cavity.	D	Death during 3rd day after diagnosis of perforation.
105	Deaver, J. B. Annals of Surgery, Phila., 1898, xxviii, 144.	F. 23	7 inches from ileo-cecal valve, opposite mesentery.	21st day.	15½ hours.	Median incision; pus and gas escaped; perforation closed with silk sutures; flushing with sterile warm water; glass drainage tube inserted; operation lasted 17 minutes.	D	Died on 3rd day after operation; necropsy showed general peritonitis, many ulcers; sutures holding well, no other perforation.
106	Finney, J. M. T. Personal. To appear in Johns Hopkins Hospital Reports.	M. 12	About 2 feet (61 cm.) from ileo-cecal valve.	During 2nd or 3d week.	About 3 days	Incision in right iliac region; escape of gas, pus, and fecal matter; intestines distended, covered with lymph, chocolate color; thorough irrigation with warm salt solution; perforation sutured.	D	Entered hospital in extremis. Death before recovery from anesthetic. Widal reaction; numerous ulcers, some nearly ready to perforate.
107	Finney, J. M. T. Personal. To appear in Johns Hopkins Hospital Reports.	M. 26	Ragged perforation about 4 mm. in diameter, about 50 cm. from ileo-cecal valve.	During 3rd week.	20 hours.	Right lateral 4 in. incision; escape of odorless sero-purulent fluid; intestines congested and distended; perforation closed with two rows mattress sutures; wiping with gauze and irrigation with salt solution; no drainage; operation lasted about 1 hour. Second operation for intestinal obstruction on 22d day.	R	Condition excellent after operation; stitch abscess; fecal fistula which closed spontaneously. At second operation fecal fistula reopened but after a week interrupted convalescence and perfect recovery.
108	Gray, F. D. N. Y. Med. Record, 1899, lv, 566, case ix.	M. 44	Lower part of ileum.	During 6th to 8th week of walking typhoid.	48 hours.	Incision over appendix; appendix entirely normal; fecal matter exuding from ulcer had produced intense general peritonitis; closed perforation with deep sutures and 2d row Lembert sutures; cleansed with hydrogen dioxid and normal salt solution; 3 gauze drains.	D	Rallied and lived 3 days; necropsy showed suture successful and numerous healed typhoid ulcers.
109	Henneid. Med. Rev. St. Louis, 1898, xxxvii, 392. Rep. by Lutz in Proc. of St. Louis Med. Soc.	. . . .	Perforation in Meckel's diverticulum.	. . . . .	. . . . .	Closure of perforation and drainage.	D	
110	Jackson, Thos. W. N. Y. Med. Record, 1899, lvi, 519.	M. 26	In small intestine; ¼ inch in diameter.	Wk. after entering hosp. about end of 2d week	About 3 days	Incision over cecum; abscess in right inguinal region; foul, fecal-smelling fluid in abdominal cavity; adhesions between intestines; flushing with normal salt solution; gauze drainage; incision left open and packed.	D	Died in about an hour.

No.	Operator and reference.	Age and sex.	Location and character of lesion.	Day of the disease.	Interval between perforation and operation.	Operation.	Result.	Remarks.
111	Kropowski. Gesselewitsch, St. Petersb. Med. Woch., 1898, n. f. 15, xxiii, 23.	. . . .	. . . . .	. . . . .	. . . . .	. . . . .	R	Gesselewitsch states that this case was reported to the Russian Medical Society.
112	Lund, F. B. Personal to Prof. J. M. T. Finney of Johns Hopkins Univ.	M. 38	Punched out perforation ¼ inch (6 mm.) in diameter, 8 inches (20.3 cm.) from ileo-cecal valve.	During 3rd week.	12 hours.	Incision in right iliac region; intestine injected, distended, covered with lymph flakes; abdominal cavity full of sero-purulent fluid; clotted blood and feces in pelvis; perforation closed with fine silk mattress sutures; thorough flushing with salt solution; drainage with glass tubes and gauze from pelvis, l. hypochondrium, subhepatic region; operation lasted 30 minutes.	D	Died from general peritonitis 48 hours later; no other perforations; ulcers and other lesions of enteric fever; perforation firmly closed.
113 114 115	Lutz. Med. Rev., St. Louis, 1898, xxxvii, 392. Proc. St. Louis Med. Soc.	. . . .	. . . . .	. . . . .	. . . . .	Lutz stated in discussion reported in Proceedings of St. Louis Med. Soc. that he had operated 3 times for perforation occurring during typhoid fever.	R R D	2 recoveries; 1 death.
116	Margarucci. Bull. d. Societa, 'Lancisiana d. osp. di Roma, 1898, xviii, 319.	F. 50	In the ileum a short distance from the cecum.	Probably during 2nd wk. (about 10 d. after entering hospital).	16 hours.	Abdomen opened below the umbilicus; escape of yellowish fluid containing fibrinous flocculi; loops of small intestine much congested; about 30 c.c. of ileum thinned by ulceration was resected and joined by end-to-end anastomosis; thorough cleansing of abdominal cavity and irrigation; gauze drainage from the pelvis, lumbar fossæ and site of operation; operation lasted 50 minutes.	D	Patient rested quietly during night after operation; but died the middle of the next day.
117	Martin, E. University Med. Mag., 1899, xi, 502.	M. 12	Lower part of ileum, probably not far from the ileo-cecal valve.	About the latter part of 3rd wk.	33 hours.	Incision in linea alba below umbilicus; escape of pus on opening peritoneum; intestines glued together by fibrinous exudate; perforation sutured with catgut Lembert sutures; peritoneal cavity wiped with gauze sponges, flushed with saline solution, drained with glass tubes; pelvis drained with ganze; oper. lasted ½ hr.	D	Partial recovery under hypodermoclysis and stimulating enemata; fecal vomiting recurred, death 16 hours after operation.
118	Martin, E. Univ. Med. Mag., 1899, xi, 502.	. . . .	Ileum.	. . . . .	Perfor'n had probably existed several days.	Operation consisted in opening large abscess containing feces, pus and gas; exudate limited by plastic peritonitis.	R	Patient recovered with fecal fistula.
119	Moore, J. E. Northwestern Lancet, 1898, xviii, 135.	F. 30	About 1½ feet above ileo-cecal valve near mesenteric attachment; opening had punched out appearance.	Third week.	4 to 6 hours.	Median incision; perforation found within 2 minutes and closed with fine silk Czerny-Lembert sutures; some time required to wash out abdomen, which was full of liquid feces, by large quantities of salt solution.	D	Death about 14 hours after operation.
120	Moynihan. Brit. M. J., 1899, i, 1097. Proceedings Leeds & W. Riding Med. Chir. Soc.	M. 16	. . . . .	About last of 3rd or beginning of 4th week.	About 24 hours.	Median incision below umbilicus; escape of turbid fluid containing lymph flakes; intense peritonitis; perforation found at once and closed with three Halsted sutures; flushing with hot sterile salt solution; gauze drainage.	D	Survived 8 days, during which time violent vomiting and diarrhea.
121	Munro, J. C. Personal to Prof. J. M. T. Finney of Johns Hopkins Univ.	M. 30	In a loop of ileum.	During 4th week.	4 hours.	Right lateral incision; feces escaping from perforation, which was closed by 2 rows of sutures; irrigation with normal salt solution; drainage with gauze and glass tube; operation lasted 30 minutes.	D	Condition excellent until about 40 hours after operation, then sudden collapse, cyanosis, high pulse; death 8 hrs. later. Necropsy showed mild peritonitis; but nothing to account for sudden death.
122	Munro, John C. Reported by Burrell and Bottomley, Boston City Hosp. Rep. 1898, 126.	M. Adult.	Not found.	About the 11th day.	3 days.	Incision halfway between umbilicus and right ant. sup. spine; well walled-off cavity size of fist filled with pus opened; condition critical and impossible to search for perforation; drainage.	D	Death in 10 hours.
123	Netschaieff and Troianoff. Ietropice rousskoi Kirourgie, 1897, ii, 406, in Presse Médicale, 1898, May 18, 271.	M. 30	Ileum.	Had been in hospital 10 days.	. . . . .	On opening abdomen, peritonitis with effusion found; fecal matter in abdominal cavity; perforated part of intestine resected.	D	
124	Netschaieff and Troianoff. Ietropice rousskoi Kirourgie, 1897, ii, 406, in Presse Médicale, 1898, May 18, 271.	M. 28	About 21 cm. above the ileo-cecal valve.	. . . . .	About 17 hours.	Four cm. of intestine at seat of perforation resected; abdominal wall not sutured until 8 days after operation; until then wound packed with sterile gauze.	R	Complete recovery.
125	Pearson, A. E. Brit. M. J., 1899, i, 1097. Proc. Leeds & W. Riding Med. Chir.	M. 14	. . . . .	16th day of disease.	9 days.	Abdomen opened in left iliac region and about a pint of fecal-smelling pus evacuated; drainage tubes inserted.	R	Satisfactory progress for 14 days, then relapse lasting 2 weeks, followed by perfect recovery.
126	Pick, T. P. Report by Rolleston, Brit. M. J, 1898, i, 1328.	M. 21	Perforation of appendix near cecum.	. . . . .	. . . . .	Appendix resected, stump invaginated into cecum, peritoneum washed out, tube left in for drainage.	D	Rallied temporarily, but died on 2d d. after operation, probably from grave constitutional symptoms; Widal reaction; had worked within 5 days of death.
127	Platt, J. E. Lancet, 1899 i, 505, and Brit. Med. Jour., 1899, i, 345.	M. 37	In a loop of ileum near pelvic brim; opposite mesenteric attachment; 1½ inches in length.	About 11th day.	About 22 hours.	Incision 4 inches long in right semilunar line; escape of gas and feculent fluid on opening peritoneum; opening inverted and sutured with continuous silk sutures; difficult to return intestines because of distention; irrigation with hot saline solution; drainage tube passed down toward pelvis; oper. lasted 50 min.	R	Convalescence complicated by relapse; after which rapid progress to recovery. Left hospital 64 days after operation.

No.	Operator and reference.	Age and sex.	Location and character of lesion.	Day of the Disease.	Interval between perforation and operation.	Operation.	Result.	Remarks.
128	Platt, J. E. Lancet, 1899, i, 505, and Brit. Med. Jour., 1899, i, 345.	M. 17	Peforation of the ileum 9 in. from cecum.	About 27th day.	18 hours.	Incision as in preceding case; gas and feces in abdomen; intestines much distended; perforation closed with difficulty with Lembert sutures because of cutting out; flushing with hot saline solution; drainage of pelvis; operation lasted 40 minutes	D	Rallied from operation, but died about 9 hours later; necropsy showed general peritonitis.
129	Platt. J. E. Lancet, 1899, i, 505, and Brit. Med. Jour., 1899, i, 345.	M. 22	About 9 inches from ileo-cecal valve.	About 18th day.	19 hours.	Incision as above; gas and feculent fluid in adbomen; edges of opening inverted and Lembert sutures inserted; flushing with warm saline solution; drainage from pelvis; oper. lasted 45 min.	D	Died about 12 hours after operation; necropsy showed peritonitis limited to pelvis and right iliac region.
130	Platt, J. E. Personal.	M. 26	3½ inches from the ileo-cecal valve.	. . . . .	About 36 hours.	Incision in linea alba; peritoneum slightly inflamed but no free gas, feces or fluid found at time of operation. A short search revealed no evidence of perforation and abdomen closed.	D	Death 15 hours after operation. Necropsy: perforation in a coil of intestine in the pelvis; numerous adhesions limiting peritonitis chiefly to right side of pelvis.
131	Platt, J. E. Personal.	M. 25	Perforation oval in shape, the long diameter being in the transverse direction of the gut.	. . . . .	About 96 hours.	Incision in linea alba; large amount of fecal matter in pelvis; one large perforation sutured; a second perforation in loop of bowel adherent to pelvis could not be closed because bound down by firm adhesions.	D	Death 7 hours after operation. Necropsy: General peritonitis; pus and feces in pelvis; numerous large sloughing ulcers in small intestine, extending upward 4 feet from cecum; appendix uninvolved; one ulcer at hepatic flexure; sutures firm.
132	Porter, C. B. Personal letter.	M. 19	Six inches (15.2 cm.) from cecum.	14 days after first malaise.	11 hours.	Incision through right rectus; turbid serum in pelvis, no fecal matter; 2 or 3 places near perforation seemed about to perforate; adjacent intestinal coils covered with fibrin; perforation closed by double row Lembert sutures, transverse to long axis of bowel; serum wiped out with gauze sponges; 2 wicks of gauze to seat of suture.	D	Patient made good recovery from operation: some vomiting for two days after operation; on third day pulse became weak and rapid; temperature rose; fecal vomiting and death. Necropsy showed intestinal obstruction due to solid feces at site of suture; no peritonitis; would probably have recovered except for obstruction.
133	Porter, C, A. Personal letter.	F, 35	Perforation with ragged edges ¾ inch, 7 inches (17.8 cm.) from cecum.	About the 13th day.	5 hours (delayed by religious rites).	Incision through right rectus muscle; turbid fluid in pelvis and lower abdomen; perforated area excised and closed with Lembert sutures; another ulcer 4 inches from cecum about to perforate and a few sutures inserted; pelvis wiped; flushing with hydrogen dioxid and normal saline solution; gauze wick to line of suture; operation lasted 45 minutes.	D	After-operation condition poor; infusion normal saline solution; strychnia, etc., repeated twice in 12 hours; condition became worse, and death the next day. Necropsy showed general peritoneal cavity apparently normal; some injection in pelvis.
134	Powers, Chas. A. Personal letter	M. 35	About 15 inches (38.1 cm.) from cecum.	. . . . .	18 hours.	Median incision; excision of edges of ulcer; suture of intestinal wound; peritonitis apparently limited to right side of abdomen; collapse prevented as thorough irrigation and cleansing as was desired; drainage to seat of suture.	D	Death 4 days later from general progressive peritonitis.
135	Price, J. Canada Lancet, 1897, xxx, 385.	F. 26	Large ragged perforation in ileum.	Ill 2 wks. before admission to hos.	. . . . .	On opening abdomen general adhesions found in region of ileum and right groin; perforation trimmed and sutured; irrigation drainage with gauze and glass tube.	R	For 2 days after operation temperature high, pulse rapid and feeble.
136	Richards and Goodall. Med. supplement to Rep. Statistical Com., Metropolitan Asylums Bd., London, 1898.	F. 8	Perforation ¼ inch (6 mm.) in diameter, 30 inches (75 cm.) from ileo-cecal valve.	End of 4th week.	12 hours.	Median incision; escape of turbid serum on opening peritoneum; intestines distended, ecchymosed, patches of lymph adherent; perforation closed by interrupted continuous suture; irrigation with warm water; drainage; operation lasted 1 hour.	D	Patient lived nearly 4 days. Necropsy showed general peritonitis and a second perforation caused by suture passing through adjoining ulcer.
137	Ryan, C. Australasian Med.Gaz.,1899, xviii, 334.	M. 38	18 inches from cecum; about size of a pea; on free surface of bowel.	During 3d week.	6 hours.	On opening abdominal cavity escape of gas; small intestine distended and congested; covered with flakes of adherent lymph; offensive, turbid fluid with fecal odor in pelvis; ulcer closed by double row Lembert sutures; intestines washed and abdominal cavity and pelvis flushed with hot sterile water; abdomen closed without drainage.	D	During anesthesia vomited matter entered the air passages; death resulted from bronchopneumonia 36 hours after operation. Necropsy showed extensive areas of collapse in lungs; perforation firmly closed; no peritonitis.
138	Saquépée, M.E. Bull. et mem. de la Soc. Anat., Paris, 1899, lxxiv, 443.	M. 23	In ileum 74 cm. above ileo-cecal valve; 3 mm. in diameter.	About the 8th day.	About 14 hours.	Incision in the right flank; on opening abdomen purulent, odorless fluid escaped; perforation readily found and sutured; irrigation with boiled water.	D	Death a few minutes after operation; necropsy confirmed diagnosis of typhoid; intestine deeply ulcerated but no other perforations.
139	Senn, N. Personal letter.	M. 50	. . . . .	During 3rd week.	4 days.	Celiotomy; perforation and large intraperitoneal abscess found; perforation sutured.	D	Recovered from operation and did well fifth day: hemorrhage from another ulcer caused death.
140	Senn, N. Personal	. . . .	. . . . .	. . . . .	. . . . .	Operated for typhoid perforation in two cases.	R	One recovery and one death.
141	letter.						D	
142	Taylor, H. M. Va. Med. Semi-Monthly, iii, 1898-99, 719.	M,	About 12 inches above cecum, circular, punched-out opening.	3 days after fever from relapse of 10 days after fever of 6 weeks.	15 hours.	Incision over cecal region; sero-purulent fluid escaped on opening peritoneum; perforation readily found and closed with deep mattress and Lembert sutures; intestines wiped and thorough irrigation with hot saline solution; multiple gauze drainage; operation lasted 37 minutes.	R	Convalescence uneventful.
143	Taylor, H. M. Va. Med. Semi-Monthly, iii, 1898-99, 719,	M.	. . . . .	. . . . .	Several days.	. . . . .	D	Lived but a few hours after operation.
144	Taylor, H.M. Maryland Med. Jour., 1899, xlii, 101.	M. Young adult.	Lower part of ileum, about 12 in. (30.5 cm.) from ileo-cecal valve; 2 perforations on free margin of bowel about 4 in. (10.2 cm.) apart.	Had been sick 6 wks.	About 4 hours.	Median incision; escape of bile-colored serum on opening peritoneum; perforation closed by deep and superficial sutures; wiping and prolonged irrigation of intestines; gauze drainage; operation lasted about 50 minutes.	D	Death about 9 hours after operation; thought to be due to acute suppression of urine. Patient had specific urethritis when taken with fever.

No.	Operator and reference.	Age and sex.	Location and character of lesion.	Day of the disease.	Interval between perforation and operation.	Operation.	Result.	Remarks.
145	Taylor, W. J. Therapeutic Gaz., June 15, 1899.	M. 34	About 10 in. from ileo-cecal valve. Size lead pencil.	About 18th day.	About 4 hours.	Celiotomy; ulcer invaginated and 2 rows fine silk sutures inserted: abdominal cavity washed with sterile salt solution; operation lasted 20 minutes.	D	Death before abdominal wall was sutured. Patient was in very low condition at time of operation.
146	Taylor, W. J. Therapeutic Gaz., June 15, 1899	M. 47	About 8 inches from cecum; pin-head opening.	24th day.	1½ hours.	Celiotomy; on opening peritoneal cavity gas and serous fluid escaped; marked general peritonitis; ulcer invaginated and 2 rows silk sutures inserted; abdomen flushed with normal salt solution; drainage introduced and wound closed.	D	Death in 24 hours from septic peritonitis.
147	Tiffany and Gamble. Personal to Prof. J. M. T. Finney.	M. 26	Perforation 5 mm. in diameter, edges sharply marked; 8 in. (20.4 cm.) above ileo-cecal valve.	In 3d week.	36 hours.	Abdomen contained fluid but no feces seen; general peritonitis; perforation sutured; intestines and abdominal cavity wiped: abdominal wound left open, packed with gauze.	D	Condition very bad after operation; rallied somewhat, but died 12 hours later.
148	Thurston, E. O. Hawkins and Thurston, Lancet, 1899, ii, 1004.	F. 11	Perforation in anterior cecal wall; ⅛ inch in diameter, surrounded by indurated tissue.	41st day.	About 15 hours.	Median, 4-inch incision below umbilicus; on opening peritoneum escape of large amount of sero-purulent fluid with faint fecal odor; margin of perforation excised; closed by Lembert sutures; thorough irrigation of abdominal cavity with sterilized water; mopping with marine sponges especially pelvis and lumbar regions; drainage tubes from pelvis and right loin; gauze drain passed upward: operation lasted 25 minutes.	R	Day after operation condition good; escape of considerable purulent fluid for several days. On fifth day after operation, right parotid bubo developed and abscess of buttock at site of injection of saline solution; 21st day, double otitis media; 24th day, effusion into left knee; 60th day, relapse lasting 14 days; Widal test positive; spleen enlarged. A year after illness patient fat and well.
149	Van Duyn, J. Personal.	M. 43	8 inches from cecum; size and outline of a small bean.	19 days after confined to bed; ill several days before.	9 hours.	Median incision; on opening peritoneum escape of gas and thin yellow feces; lymph on intestines and mesentery in vicinity of perforation; closure of perforation with 2 rows of sutures; abdomen cleansed and closed without drainage.	D	Death 55 hours after operation from peritonitis.
150	Wanach, R. Rep. by Gesselewitsch M. St. Petersburger med. Woch., 1898, xxiii, n. f. 15, 21.	M. 24	Two perforations, 21.6 cm. and 41.6 cm. from cecum.	About end of 2d week.	18 hours.	Median incision from umbilicus to symphysis; escape of sero-purulent fluid on opening abdomen; peritoneum injected; fibrinous deposits on intestine; perforations closed with Czerny-Lembert suture; numerous antiseptic tampons inserted in all directions; wound left open.	D	Patient in very low condition after operation; stimulants and infusion of salt solution unavailing. Death 43 hours after operation; disease of very severe type; at necropsy very numerous intestinal ulcers, abscesses of spleen and mesenteric glands, ulcer of larynx, etc., were found.
151	Willard, De Forest. Annals of Surg., 1899, xxix, 503.	M.	4 in (10.2 cm.) above ileo-cecal valve; just large enough to admit grooved director.	15th day.	Between 5 and 6 hours.	Incision in right semilunar line; escape of ill smelling, greenish-yellow serum and feces; ileum greatly congested, several thin ulcerated areas; perforation closed by interrupted Lembert and second continuous sutures; irrigation with hot sterile water; large glass drainage tube inserted.	D	Death almost immediately after operation.
152	v. Winiwarter. Rep. A. Polis, Ann, Soc. Méd. Chir. de Liège, 1897, xxxvi, 266.	M. 18	3 perforations found in small intestine near cecum.	. . . . .	About 2 days.	Median incision; escape of sero-purulent fluid with feces; lymph flakes adherent and appearance of septic peritonitis; perforations sutured; operation hastily completed by tamponing abdominal cavity because of patient's bad condition.	D	Death 18 hours after operation; necropsy confirmed diagnosis of typhoid fever.
153	Wladisslew, C. W. Rep. by Gesselewitsch, St. Petersb. med. Woch. 1898, xxiii, n. f. 15, 21.	. . .	. . . . .	. . . . .	. . . . .	Perforation not found at operation, but fecal fistula developed a few days later.	R	Recovery.
154	Woodward, S. B. Boston Med. and Surg. Jour., 1898, cxxxix, 544.	M. 18	Small intestine; opposite mesentery; size of a pea.	About the end of 2d week.	About 9¼ hours.	Median 3-inch incision; 6 inches of intestine thickened, red, coated with lymph; whitish fluid and feces in abdominal cavity; edges of perforation excised and closed with double row Lembert sutures; flushing with normal salt solution; suture without drainage.	D	Patient nearly moribund at operation; free stimulation, oxygen inhalation, elevated foot of bed, etc.; lived 9 days in typhoid state; no symptoms of peritonitis; wound gangrenous at time of death; abdominal cavity uninflamed except slightly in region of sutures.
155	Champlin, S. H. Personal com. "The Plexus," v. 5, 164.	M. 10	Perforation not found.	During 6th week.	3 days.	Incision; turbid fecal fluid; cavity entered, formed by firm peritoneal adhesions, left of median line, below McBurney's point; tube and gauze drainage.	R	Recovery; bacteriologic examination demonstrated, typhoid bacilli, colon bacilli and various monococci. Widal reaction positive.
156	Champlin, S. H. Personal com. "The Plexus," v. 5, 164.	M. 22	Perforation of ileum, about 30 cm. from ileo-cecal valve	14th day.	. . . . .	Median incision; fecal fluid in abdominal cavity; intestines and omentum much inflamed; perforation closed by transverse continuous suture and omental graft stitched over; toilet of the peritoneum and drainage.	D	Reacted well, but was taken with vomiting and persistent cough, and died 3 days after operation. Necropsy showed suture unchanged; peritonitis limited to pelvis about perforation; hypostatic congestion of lungs; purulent infiltration right side chest and abdomen; Peyer's patches all thickened; Widal reaction positive Bacteriologic examination showed muscles infiltrated with streptococci.
157	Champlin, S. H. Personal com. "The Plexus," v. 5, 164.	M.	Perforation 20 cm. from ileo-cecal valve.	At the end of 1 month.	. . . . .	Operative treatment as in preceding case.	D	In spite of free stimulation patient did not react and died 10 hours after operation.
158	Saleeby, N. M. Philadelphia Medical Jour., 1899, iv, 270.	M.	Pin-hole perforation in thickened and inflamed Peyer's patch, 18 in. from ileo-cecal valve.	13th day.	About 24 hours.	Incision 3¾ in. along outer border of rectus abdominis below umbilicus; escape of straw-colored serous fluid; longitudinal infold of intestinal wall and continuous silk suture, reinforced by continuous catgut suture; 2 other thinned areas sutured; intestines wiped; gauze drainage from both iliac fossæ and from Douglas' pouch; operation lasted 1 hour.	R	Slight nausea and vomiting during first day after operation, but no pain nor tenderness: nutrient enemata and free stimulation; recovery from operation was uneventful. Fever lasted 25 days and relapse 16 days, but eventually perfect recovery.

four hours, which is 29.09 per cent.; or in the second twelve hours, which is 30.76 per cent.; after twenty-four hours the recovery rate falls to 13.63 per cent.

TABLE SHOWING RECOVERY RATE OF OPERATION ACCORDING TO THE NUMBER OF HOURS AFTER PERFORATION OCCURRED.[4]

	Died.	Recovered.	Percentage of recoveries.			
Under 4 hours	6	2	25.	19.44	15	25.33
4 to 8 hours	11	1	8.33			
8 to 12 hours	12	4	25.		29.09	
12 to 18 hours	17	8	32.	30.76		
18 to 24 hours	10	4	28.57			
Over 24 hours	38	6	13.63			
Not given	27	12	30.74			
Total	121	37	23.41			

These figures, so far as the number of cases justify us in drawing a conclusion, certainly carry out the statement which I first made. It should be modified, however to read that during the first eight hours, the chances of recovery are only about one-half of that which obtains during the rest of the first twenty-four hours.

It is to be remembered that most of the operations done under four, or even eight, hours must have been in hospitals, for in a private case it is practically impossible to summon the physician and then the surgeon, make preparations and do the operation in so short a period after the perforation has occurred. Moreover, the patients operated on in hospitals have not only facilities which do not exist in any private house, even the best, but they would have the services of men on the hospital staffs, on the whole more skilled than many of those who operated on other cases, yet the mortality rate is almost twice as great in the first eight hours as in the next sixteen.

I am convinced that this is due to shock. If there be no shock or it is only slight, no surgeon would allow the contents of the intestine to flow into the abdominal cavity for a moment longer than is possible, but if there be shock and, especially grave shock, I believe it to be the duty of the surgeon to wait for a reasonable time for at least a partial recovery from that serious condition. I can not agree with Taylor when he states that the shock is due to sepsis and not to the perforation. Thus Fitz states that of 80 cases, the onset of the symptoms was *sudden* in 56, while in 15 they were gradual or latent, and in 5 there were none. Finney says: "where marked symptoms of shock and collapse were present at the time of operation, the prognosis was distinctly influenced for the worse," and again, "the signs upon which most dependence is to be placed are sudden pain in the abdomen with symptoms of collapse accompanied by an abrupt fall in the temperature, it may be even several degrees." All that we know of shock, it seems to me, corroborates this view. How many of us have seen the serious shock produced by a finger pinched in a door, or other similar accident in which the element of sepsis can not possibly enter. Look at the records of perforation in gastric ulcer and see in how many such cases, similar to those of typhoid perforation, the patients fall down in collapse. It is the pain of the perforation and extravasation and not the sepsis which produces the initial shock. The first moment possible after this has subsided is the time to operate. Were it due to sepsis, then the initial shock should be slight and should steadily increase with the increasing sepsis; but as a matter of fact the initial shock is the greatest and is followed by more or less subsidence of shock.

Taylor's view that the shock is due to the size of the opening, and, therefore, to the rapidity of extravasation, while theoretically true, is scarcely substantiated by a reference to the tables. This point not having been in mind when the tables were made, the size of the opening is not noted in each individual case, but I find 54 cases in which the size is stated. I have tabulated those as "large" openings that were larger than a lead pencil (about a quarter of an inch) and as "small," of lead-pencil size or less. I find that in 25 cases with large or multiple openings, the deaths were 19 and the recoveries 6, a recovery rate of 24 per cent.; in 29 cases of small openings, the deaths were 20 and the recoveries 10, an operative recovery rate of 33 per cent., or 9 per cent. more.

It is possible that larger statistics by changing the facts will change my views to some extent, but I doubt if operations done during the presence of severe shock will ever prove as successful as those undertaken as quickly as possible after primary shock has passed away.

On the one side is the shock, on the other the increasing infection of the peritoneum. He will be the best surgeon, as he is the best sailor, who avoids both Scylla and Charybdis.

To avoid both of these dangers, if possible, Cushing has proposed to operate in what he terms the "preperforative" stage. Should it ever prove possible accurately to diagnosticate the preperforative stage, that, unquestionably, will be the most favorable time for operation. I quite agree with Finney in his belief that so far as operative technique is concerned—with the exception of one point to be alluded to a little farther on—we have probably progressed nearly as far as we ever shall. Our future increased success will depend far more on our accuracy of early diagnosis, and especially if it should prove possible accurately to diagnosticate an impending rather than an actual perforation. I would urge most strenuously, therefore, that, as in appendicitis, the surgeon should be called in at the earliest moment when any abdominal symptoms indicate possible perforation. Preparations can then be made beforehand and, should the symptoms call for it, an exploratory operation should be done after the fashion proposed by Finney. These, I think, are the two most distinct advances that we have made in the last two years in the treatment of typhoid perforation; viz., the possible diagnosis of an impending perforation, followed by immediate operation and exploratory operation under cocain.

4. *How shall we operate?* As already indicated, the most important recent advance in the technique is the use of cocain instead of a general anesthetic. This was first used by Cushing in two cases. In a personal letter to me he reinforces his suggestion and says: "I think local anesthesia is a great step in advance. I shall never use general narcosis again in typhoid." To this Finney adds the suggestion "that in any case in which the diagnosis is obscure and there is reason to suspect the existence of a perforation, a small incision be made under cocain anesthesia . . . and that cultures be taken from the abdominal cavity. . . . This exploratory incision would be followed by very little disturbance to the patient and very slight risk. If the presence of a septic peritonitis is determined, this incision can be enlarged and the operation for the relief of the perforation and peritonitis can at once be car-

[4] Cases operated on "8" hours, "12" hours, etc., after perforation are included, respectively, under "4 to 8 hours," "8 to 12 hours," etc.

ried out." Still more, if we can diagnosticate the preperforative stage and anticipate both shock and sepsis, we shall have made an important further step in advance.

A very brief summary will be sufficient to indicate the further technique. The incision would be best made in the right linea semilunaris, or through the rectus muscle. If such a general peritonitis be present that this will not enable us thoroughly to cleanse the abdominal cavity, a second incision may be made in the left iliac fossa.

The perforation should be sought: 1, in the ileum; 2, in the adjacent cecum and appendix, and 3, in the sigmoid, where it occasionally occurs. One case of perforation in Meckel's diverticulum (109) has been reported. When found, the perforation should be sutured without paring the edges, which is both a loss of time and tissue, and also involves possible hemorrhage, to arrest which more time must be consumed. All of the thinned area should be included in the suture. The occasional wide extent of this area is well shown in Plate V in my book. The suture should not be continuous, but Halsted's mattress suture. If a second row of sutures is deemed necessary, this may be continuous, as it saves time. The amount of inversion of the bowel must not be such as seriously to impair the lumen of the gut. Should the perforation be very extensive, or should two or more adjacent perforations render it necessary, a resection and anastomosis of the bowel may be made. Of 7 cases of resection, 3 (31, 40 and 124) recovered. Should there be found other points of impending perforation, these should be sutured as a preventive measure. Some patients who apparently should have recovered have been lost by a later perforation; 2 died from subsequent hemorrhage (100, 139). In 5 the appendix was removed without a recovery.

The cleansing of the peritoneal cavity is one of the most important steps in the operation. Unless this is thoroughly carried out the operation will certainly prove futile. Whether it shall be done by flushing or wiping or both must be decided by each operator at the time.

Drainage in most cases will be necessary, but I quite agree with Finney that "many cases in which we have heretofore been accustomed to drain would recover more promptly without it. . . . If the inflammatory process has not been of too long standing and the peritoneal cavity can be at all satisfactorily cleansed, it will be better to fill the cavity with salt solution and close the wound." Of seven cases not drained, two recovered.

Speed in operation is an important factor in recovery, as would naturally be supposed in cases which are so unfavorable in consequence of the existing fever and its concomitant exhaustion. Only one case (107) in which the operation lasted an hour or over was followed by recovery. A number have been done in from seventeen to thirty minutes. On the other hand, in our anxiety to complete the operation quickly, we must never sacrifice thoroughness, both of closure of the perforation and of cleansing the peritoneal cavity.

One criticism by Cushing, of a statement in my book, I feel is just. I said: "I can scarcely think that we would ever be justified in reopening the abdomen. . . Possibly a very exceptional case might justify such a procedure, but a typhoid patient rarely escapes with his life even after one operation and could not be expected to survive a second. The same remark would apply to any new perforation which might occur. Such cases must, unfortunately, be left to their fate." The experience in Cushing's first case in which three operations were done and yet recovery followed, and the extraordinary vitality exhibited in Finney's third case "who, subsequent to the operation, suffered two relapses, one of great severity, a suppurating otitis media, a left sided pleurisy, a right sided femoral phlebitis, a severe neuritis of both legs and the painful toes so common after the cold bath treatment," and his fifth case, "who, on the twenty-second day was again operated upon for relief from obstruction of the bowels," show that we ought never to despair of any case.

CONCLUSION.

My views on the operative treatment of typhoid perforation may be summarized, therefore, as follows:

1. The surgeon should be called in consultation the moment that any abdominal symptoms indicative of possible perforation are observed.

2. If it be possible to determine the existence of the preperforative stage, exploratory operation should be done under cocain anesthesia before perforation, shock and sepsis have occurred.

3. After perforation has occurred, operation should be done at the earliest possible moment, provided:

4. That we wait till the primary shock, if any be present, has subsided.

5. In a case of suspected, but doubtful perforation, a small exploratory opening should be made under cocain to determine the existence of a perforation, and if hospital facilities for a blood count and for immediate bacteriologic observation exist, their aid should be invoked.

6. The operation should be done quickly, but thoroughly and in accordance with the technique already indicated.

7. The profession at large must be aroused to the possibility of a cure in nearly, if not quite, one-third of the cases of perforation, provided speedy surgical aid is invoked.

THE PHYSICIAN IN HAWAII.

BY E. S. GOODHUE, M.D.

Late Government Physician and Medical Superintendent of Malulani Government Hospital, Wailuku, Maui, Hawaiian Islands.

LOS ANGELES, CAL.

As disease and death have prevailed among all people, from the earliest period, so physicians have always been a necessary evil. Since the day Adam got rheumatism cooling off too quickly after his day's work, and Eve became subject to nervous headaches, worrying over the meals and the children, the doctors have been with us, and, unless they meet with better success in discovering "elixirs" in the future than they have in the past, bid fair to stay by us forever. The Indian medicine-man was a unique character, and a person of some prominence among his tribesmen. Like the average practitioner in some little town, he could afford to dress better than his fellows. So in Africa, and every other country, the doctor is a distinguished individual, because from the very nature of his subject, no one except another doctor can say that he doesn't know a great deal about medicine.

In those early ages physicians acquired that wise, masterful look, and the silent tongue, which have remained with them to this day. The Asiatic patient extended his hand to the living X-ray, who took his pulse, and thereby gazed through his anatomy, viewing his beating heart, enlarged liver and other delinquencies, as clearly as if they lay on the table at his touch. The modern patient comes to the physician in much the same way, expecting him, by some unexplained, supernatural method, to see through his tongue into his stomach; to be able to count the microbes as they frolic in his lung tis-

sue; and the smaller the doctor, the more he panders to this false reverence. The Hawaiians had physicians, and plenty of them. They were called *kahunas,* and belonged to about a dozen different schools. At this time it was very generally believed by the Hawaiians that all diseases were directly brought about by evil spirits. No doubt some of them were. They also thought that the *kahunas,* who professed to be able to communicate with the gods concerned in any particular case, were the ones to propitiate these gods. This was good reasoning based on false premises. With the same notion people often go to the quack, believing, because he says so, that he can propitiate the 501 different organisms working their destruction. If a chief became very sick, triturated, the child might have died of collapse. This is why the system is so popular among mothers. They know by experience that their faith and the doctor's pills will work wonders, but that pills alone, no matter how many or of what sort, may be eaten with impunity. They have never tried faith alone, or they would dispense with the pills. The *kahuna,* like the modern doctor, was something of a hand at prognosis. That is, he could foretell certain approaching events. I knew a doctor who, about twenty minutes before the death of his patient, would take out his watch, turn to the sorrowing friends, and say, "He can not live over an hour." The Hawaiians went by omens, however. If a patient had a "bilious" attack they often put him on a pile of hot

ROYAL PALM AVENUE TO QUEEN'S HOSPITAL, HONOLULU.

offerings were made in the temples, and sometimes human sacrifices. In ordinary cases the *kahuna* was called in, and he forthwith set about to concilitate the god whose feelings had been hurt. Professor Alexander says that "certain vegetable remedies were used, but their efficacy depended entirely upon the good will of the spirits."

This school, called *kahuna lapaau,* corresponds to one of our latter-day systems, the efficacy of whose remedies depends entirely on the amount of faith the patient is able to place in them. I knew a child that ate at one sitting a bottleful of aconite pills. As the child could exercise no faith, one way or the other, the medicine didn't give it even indigestion. With faith not too much stones, covered with wet leaves, and left him there, enveloped in layers of *kapa.* Under the influence of the combined action of damp climate and lithic heat the man perspired, after which he was dipped into salt water—into the sea—where he cooled off. If he did not improve, he was fed with baked squid. If the man still failed to get better, the doctor did not give up. He asked for a consultation, calling in a medium that had "familiar spirits;" a man who knew a spirit that was able to expel the one that was causing the trouble. There were *kahunas* who employed departed spirits, others who acted under the influence of a "wind," or spirit, and indulged in tricks similar to table-rapping. There were the *kahunas,* who, instead of helping people out of sickness,

prayed them to death by various methods. Actuated through motives of revenge or gain, the *kahuna* selected his victim, then secured some of his personal property, like a bit of finger-nail, or some hair, and began a series of offerings and incantations. It is suspected by those who knew, that a little poison came in opportunely. Very likely, and, acting on such emotional, superstitious people as the Hawaiians are, it is easy to understand how the consciousness of a powerful, malevolent, impersonated design on their lives might finally cause death. Appetite and digestion would become impaired, the secretions disturbed, sleep lost, functional troubles ensue, followed by a nervous breakdown. We have seen the same picture in America, the patient imagining that he is afflicted with some fatal disease. Kahunaism is practiced by the Hawaiians to-day, but to a lessening extent, and largely under cover. Yet it places, in the foreign physician's way, the greatest obstacle to successful work among the natives, and is the cause of much suffering and many deaths. Occasionally a death occurring as a result of malpractice will come to public notice, and the *kahuna* be imprisoned or fined for the offense. While this protects society somewhat, and has a good moral effect, it can not remove the superstition. Only education can do that. Many a broken arm or leg is taken to the *kahuna,* who bandages it up with *koali,* the convolvulus vine common all about. In this way the saddest kinds of deformities result. Very often, indeed, the carefully applied splints and bandages will be taken off the instant the doctor rides away, and in their place *koali* applied. Every two years the government inquires of its physicians concerning kahunaism in their districts, and the following answer, copied from one of the late reports, corresponds to the larger number: "The practice of *kahunas* in this district is, I am confident, quietly carried on. The Hawaiians will not expose them, and investigation only elicits falsehoods and assertions of ignorance. Nearly every group has its family *kahuna,* and Honolulu furnishes the shrewd ones upon occasion. I have frequently met with the evidence of the presence of these mystery workers, and, in the circle about the sick bed, easily noted the one "with power; yet under no inducement will they give any knowledge of the proximity of any such." But their power is most certainly waning, as it must have begun to do the day Christian teachings took root. Superstition is the hardest of all evils to eradicate. It is not out of us yet, especially medical superstition, and, strange as the statement may appear, seems compatible with a fair degree of education. Read over the "testimonials" found in any patent medicine pamphlet, written by ministers, who consider themselves orthodox religiously. Count the number of deaths resulting from the practice of "Christian Science" in the most civilized country in the world. Go back to the little country town with its traveling dentist; its nostrum vendor, in the glare of his torchlight, handing out bottles of panacea at one dollar a bottle; its London or Berlin "specialists" lodged at the hotel, and its glib-tongued peddler selling electric belts and lead rings to teacher and tailor alike. When we consider all this, we must acknowledge that the Hawaiian, just emerged from his primitiveness, is grasping truths quite as fast as he can assimilate them. During his reign, Kalakaua, who was at heart inclined to the superstitions of his fathers, granted to *kahunas* the right to practice their machinations, much to the prejudice of respectable physicians, and to the cause of morality generally.

Fortunately for a people addicted to injurious customs, and living in a tropical country, whatever waves of sickness reached here came at rather long intervals, and were not so persistent as one might expect. In 1805, Kamehameha I's army was attacked with a disease known as *mai okuu,* literally, a sickness that makes one let go. It let a great many go, and was probably either cholera or the bubonic plague. According to a native writer, as many as 400 died during one day in one place. This lasted three months, and in all likelihood came from China. The next episode in this line was a rather short-lived epidemic of la grippe, followed in 1848-49 by measles, introduced from Mexico. The soil was new, and the disease took hold with alarming rapidity, proving, to the susceptible population, a malady of great fatality. In some districts there were not enough well persons to provide food for those who were ill. One-tenth of the people died. Also, on the heels of this scourge came whooping-cough, taking away most of the children under one year old, after which a general influenza prevailed, greatly enervating the most of the convalescent population. In May, 1853, smallpox arrived from the Coast. The Board of Health took active measures to check its spread, and thought they had, but in July it broke out afresh. Of 6405 persons who had it, 2485 died, costing the government $30,000. Since 1850 the population has decreased by 11,027 persons. This same disease was introduced in 1871 by some whalers, and again in 1872, but the authorities were able to check both epidemics. The last smallpox epidemic occurred in 1881, having been brought from China, and 282 persons died. As a result of these periods of disaster, the legislature passed a law making vaccination compulsory. This is effectually carried out by the government physicians, who are required to visit the schools each year. Annually, in his district, each physician vaccinates all those who can not show the desired scar. The law reads: "Parents and guardians are required to take their children to the vaccinating officer within six months after their birth."

The most recent scare Honolulu has had was that of 1895, when cholera was introduced by the *Belgic,* from Yokahama. She had on board 500 steerage passengers, three of whom died on the way out; she was twelve days making the trip. When the ship entered Honolulu harbor, August 9, one passenger was found suffering with cholera. He died next day. The immigrants were placed on the quarantine island, and steps taken by the Board of Health to prevent dissemination of the disease. The city was divided into ten sanitary districts, each being inspected by a physician. The water-supply was at once attended to, squads of men were set to work cleaning yards and streets, the use of fish and the assembling of crowds were forbidden, fumigation and disinfection rigorously carried on, a cholera hospital was established, and a bulletin issued twice daily. A house-to-house canvass was made, and premises thoroughly cleaned. Travelers and freight from island to island required a special permit, while several of the foreign steamships refused to carry Hawaiian mails. In thirty days the epidemic was at an end, having cost $61,697.55, and sixty-five deaths. Great credit is due the Board of Health for the methods it employed, and for the energy with which it employed them, stamping out, in so short a time, such a formidable disease. W. O. Smith, president of the Board of Health, is a "missionary," whose efficient efforts at that time saved a good many of the "antis" from going where they pre-eminently belonged.

The Hawaiian Board, which has been a safeguard to the country more times than one, was organized in 1850, with Dr. Rooke, Queen Emma's father, as president. Nine years after, Kamehameha IV and Queen Emma

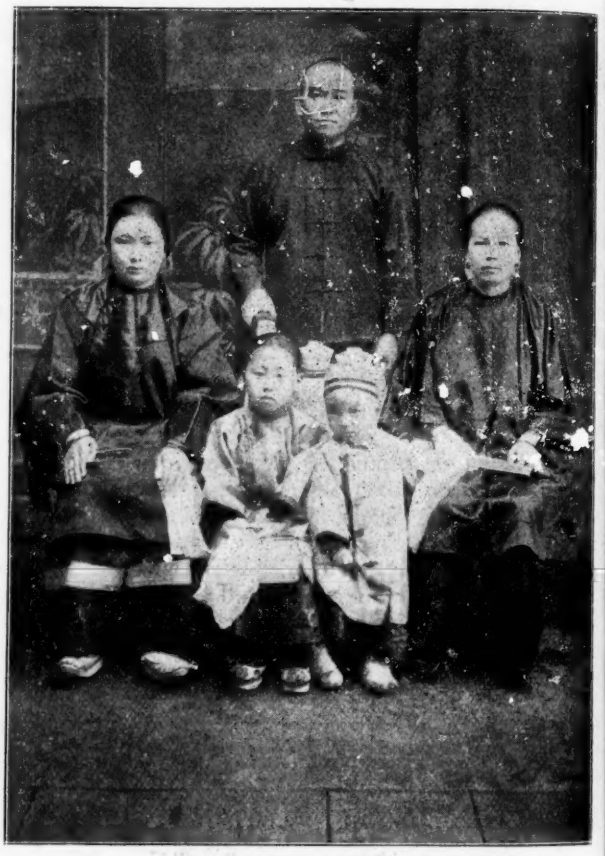
NATIVES PREPARING PAIAI—COOKED TAIO—THE NATIONAL FOOD.

founded the Queen's Hospital, canvassing the Honolulu people for subscriptions. Later, generous endowments were left. Since then the Malulani Hospital, Maui; Cottage Hospital, Kaola, Kauai, and hospitals at Waimea, Kauai, and Hilo, have been established. These are provided with a physician, who is the medical superintendent; nurses, attendants, and all the necessary equipments of a dispensary. Here any sick natives may come and be cured free of charge. In these hospitals are found Caucasians, natives, Chinese, Portuguese, Japanese, Gilbert Islanders, negroes, and stray individuals from all countries, affected with almost every disease. The matron and nurses at the Malulani Hospital, one of the largest outside of Honolulu, are Franciscan Sisters, whose skilful care has the testimony of many a discharged patient. The Board of Health employs some twenty-six physicians, called "government physicians," who preside over the hospitals, asylums, jails, leper asylum, leper-receiving station, and the various districts of the islands, receiving from $720 to $2100 a year. This

NATIVE HOMES.

is given as a sort of bonus to provide the residents of the sparsely settled districts with reliable medical attention. The physician, besides treating all indigent persons, more particularly Hawaiians, without charge, examines leper suspects, who are sent to the receiving station at his order; inspects all schools in his district once each year, for "evidences of infectious and contagious diseases," vaccinating these, and furnishing the government with monthly, quarterly, biennial and hospital reports, in which are recorded the names of the patients treated, disease, number cured or benefited, and those who have died. Each school child must be given a certificate of examination and vaccination. Calls must be answered at any time, while the physician furnishes everything except medicine. Conscientiously held, the position is far from being a sinecure. But where work is duty it has its satisfactory side. At the ports, physicians have extra duties. In Honolulu the city physician dispenses drugs for a very large number of natives. Besides his salary, the government physician has whatever plantation work there may be in his district, for which he is paid a small stipend. For $600 a year he may have to attend to all the medical wants of 2000 or more creatures who are often sick. The plantations are obliged to provide medical attendance for their "shipped" labor, and many times the physician is called into court to testify that Mr. Number 862 is quite able to go to work; or that Mr. Number 900 has little the matter with him. If there be foreign residents in the district, they employ and pay the physician. It is the government's purpose to adjust the salaries of its physicians to the amount of labor they perform, and the revenue they derive from outside practice, and this is generally done. A large number of American doctors have applied for positions under the Board, but I can not see what satisfaction or benefit it would be to them to go there, unless they need the climatic change, or would derive satisfaction from the performance of this kind of missionary work. That is its greatest reward. Indeed, without this spirit, I doubt whether a man is qualified to enter the service. A man who is not a humanitarian will find the work disagreeable and unbearably irksome, because it is with members of a class that pays no attention to his directions; a class most unesthetic in every way, and one which, unless he be in a hospital, will give him no clinical satisfaction, as the course of the various diseases he treats can not be closely followed. It is, however, a good field for the study of skin diseases, particularly leprosy.

The natives are not able to get along without certain drugs, for which they call very often: *paakai* or Epsom salts; *hualo,* pills; and *aila,* castor-oil. The way they will swallow the latter, and pour it down the throats of their poor babies, is no less than amazing. A native will come into the reception room, and sit down; or not come in at all, but sit on the steps, or squat on the lawn in front of the house, and wait. He does not mind waiting, in the least. After a time he will cough, or grunt, and when you come out, say, touching the spot indicated, "pilikia." He is not a satisfactory patient, for he will evade a direct answer until you are ready to give up in despair. *Eha opu,* pain in the stomach; *eha kino,* pain in the body, etc., are all the history he will furnish. Sometimes he will prescribe for himself, asking for calomel or a special ointment, or his favorite "pain-killer," being very particular as to quantity, color consistence, and smell of the article given. A few days ago a native came for some oil, and would not go until he got a quart bottle full; a bottle that had not been opened. He wanted it for himself, his family and neighbor's family. He had come twenty miles for it, over sand dunes and lava beds; and he got it. Occasionally the doctor is called away to a native house, always in great haste, as the patient is reported to be on the eve of dissolution. Sometimes it is true, but oftener he has a slight ailment like toothache or rheumatism. The friends do not seem to be able to discriminate between the cases that require haste, and those which do not. If the doctor is to come, he might as well run. I went three miles one dark night to see a patient who had hurriedly summoned me by telephone. When I reached her, she was out in the yard talking to some neighbors. She received me, gave me a chair, then told me incidentally that she had felt a pain in her side for three months. If the patient has been sick for a long time, when he arrives, the doctor may find a dozen friends in the room, some of them weeping.



THE CHINESE CONSUL AND FAMILY.

When the patient has died, a well-attended funeral takes place, with several choice wailers; and then the house is vacated for a few weeks. It is the same if a death occurs in the hospital; nearly all the natives in the other wards will leave. For the same reason they object to autopsies being held on the bodies of those at their disposal. Their home remedies and methods of treating disease are much like those common to ignorant people the world over. *Lomilomi,* a scientific massage, is practiced by men and women alike, and is conducive to rest and comfort. After a long, weary tramp, or a horseback ride; after a fall, or when the muscles are sore and stiff from any cause, an hour or less of this friction, when every muscle is rubbed, and pressed, and squeezed, will make a new person of you, and send you to sleep. Jarvis writes: "However wearied he may be, fatigue soon leaves him, each muscle is kneaded, each joint cracked,

and the whole corporation thumped, pounded and squeezed until every old ache and chafe is fairly driven out of it." They bind up sores with macerated herbs, burn out warts, bathe in the river for measles, make their sickrooms dark and close, and walk about just as long as they can. One day Dr. Smith, brother of the attorney-general, told me he had met a native with a dislocated right shoulder, and that he would try to persuade the man to let us do something for him. After a considerable time the doctor was successful, and we went down to the house. The man was the husband of a former governess, and when we reached the house, everyone was sitting out-of-doors, on the ground, bare-foot and happy. Placing the man under the influence of an anesthetic we worked for several hours, but could not correct the trouble. The accident had occurred a month or two previously, and shows the nature of a physician's duties in Hawaii.

NERVE LEPROSY.

TUBERCULAR LEPROSY.

I shall never forget the unselfish interest taken by Dr. Smith, whose life was at last sacrificed for the people whom his father, also a physician, came to uplift. Here as elsewhere, one must not be impatient of results. I was called to a native house one night to attend the birth of a child. A rather pretty girl, not over 16 years of age, lying on a mat on the floor, proved to be the mother. A wrinkled old crone, with an unenviable *kahuna* record, sat near by. I ordered the girl placed on the bed, left some other directions, and promised to come back in the morning. When I returned I found the girl again on the mat, and no one within call. As I had quietly slipped in without knocking, I caught the girl with a letter in her hand. It was blotted with tears, which flowed down her cheeks, and her sobs filled the room. When my presence became known, she calmed down, and told me the whole story. She had been betrayed by a young white man of good family, who lived in Honolulu, and coming here to this little hut under the *kahuna's* care she had escaped the inquiries she dreaded. Her lover had promised to marry her after a time, but now that the baby was born, he had sent her money, and told her he could not marry her, as his parents objected on account of his youth. She didn't know what to do. My heart was strangely touched: "Come to my house," I said, "and we shall arrange the matter." That day she was placed in a room, where she had an uneventful convalescence. I wrote to her father and mother, relating the details, of which they knew nothing; wrote to the foolish boy, as I would want some one to write to my son if he ever went so far wrong, and then talked to her. She could not nurse the baby, so one of her aunts took the child. Natives are always ready to adopt other people's children, and loan their own. After she had entirely recovered we saw little of her, but she sought her own people. Later she left us, and in a week had married a half white who met her a few days before the event. She never came near us again, and the only time I saw her was when she called me to see her sick baby, which she had taken back. She had nothing to say about the past, and I forbore saying anything, but I thought to myself that my effort at reforming native girls was rather a failure.

The government physician's patients are the foreign residents, the half white, a few independent natives, Portuguese and scattering Asiatics, in his district, which may include, like my own does, some 6000 or 7000 persons. By far the larger number of Portuguese, Chinese

and Japanese patients are laborers on the sugar plantations. These are distributed among collections of houses, or "camps," numbered for convenience, and furnished with a cook-house at which the men get their meals. Generally the races are separated. The houses are rough board dwellings, white-washed, and partitioned off, with fifteen or sixteen bunks, one above the other, in each apartment. Although the overseers endeavor to have these quarters kept clean, they can not well do it so long as the tenements are held by such a people. The floors are never swept; refuse and a mass of vegetable matter pickled in tubs by Japanese add their smells to the rest, and make the place one from which the physician is glad to escape early. But he must make his "rounds" one or twice a week, attended by a police officer, a Chinese and a Japanese interpreter, visiting all the sick, and prescribing for them; sending the "shammers" to work. It is very difficult to get the Chinese to take your medicine. They have no faith in it, and the custom is to see that each patient takes a dose before the doctor goes. A Chinese sick man may generally be recognized by the congested patches of skin about his neck and back, pinched red for counter-irritation, I suppose. The Japanese cut one or more small patches of hair from the heads and shave the spot, wearing a red blanket over their shoulders to distinguish them. Both apply a peculiar reddish ointment to cuts and sores.

THE PRESENT STATUS OF SURGICAL TUBERCULOSIS.*

A REPORT OF THREE CASES, WITH EXHIBITION OF PATHOLOGIC SPECIMENS.

BY RALPH ELMERGREEN, M.D.

MILWAUKEE, WIS.

The promises of science relative to the causal treatment of tuberculosis have so far remained unfulfilled. The German scientific minds, once carried away by the wildest millennial dreams, now stand humbled on the threshold of great discoveries and bow to defeat. But defeat is godsend here, for it is the only path which can lead to revolutionary discoveries in science.

Koch reasoned well, and with that indomitable will so characteristic of our Teuton colleagues, he followed up his reasoning in the laboratory with an indefatigable energy that still baffles our greatest bacteriologists. A glycerite of dead tubercle bacilli was his reward. Whence came defeat?

The question suggests the answer. If by flawless reasoning and logical deduction we arrive at error, it is time to suspect our premises.

Every exact science calls for a working hypothesis universal in application and immutable as time. Without such a hypothesis there can be no material progress. To illustrate: The atomic theory rescued chemistry from empiricism, mysticism, fraud and death, and placed it on a pedestal that made the discovery of the X-ray possible. Kepler's laws brought forth system from chaos, and reduced astronomy to an exact science. What working hypothesis is responsible for tuberculin and serum-therapy? The laws of immunity. What are those laws? We do not know.

Once establish a working hypothesis, universal in application, bearing on immunity, and your vague ideas of toxins, toxalbumins, antitoxins, etc., will resolve themselves into simple corollaries, and progress will be possible.

The germ theory is the hypothesis governing all infective and infectious diseases. The theory appeals to every sane mind; it is demonstrable and as universal in its application as the Newtonian theory, and while the latter can only be demonstrated by results, the germ theory admits of rational demonstration. I accept this theory in its naked entirety, without any reservation whatever, as the hypothesis of infective and infectious diseases in general, and of tuberculosis in particular. The doubts raised by speculative theorists as to the causal correlation of germs, germ products, and disease, meet with my unqualified disapproval. But I see error, failure and disaster in the utilization of the germ theory as the hypothesis of scientific treatment. The hypothesis governing disease can *not* serve as the hypothesis of rational and scientific cure. Knowing the toxins, it does not naturally follow that the exhibition of the antitoxins is scientific treatment. The mutual relationship of toxins to antitoxins, or germs to "devirginized" pabulum, is not that of mineral or vegetable poison to mineral or vegetable antidote. Hence I repeat it, it is time we look to our premises and cease groping in the dark for want of a hypothesis. In 1882 Robert Koch discovered the tubercle bacillus. Have we multiplied our talents by one iota since?

The diffidence with which I approach my convictions and essay the great scientific truth of the absolute necessity of a hypothesis of immunity is born of a deference to my superiors and not of any misgivings I may hold as to my position.

A scientific hypothesis, literally and abstractly correct, compassing the chaotic and apparently contradictory phases of immunity as demonstrated by the accumulated data covering a period of more than seventeen years, still remains the unsolved problem of science. Who will solve it? We have the falling apple; where is the Newton?

It is not absolutely necessary that this causal theory be rationally demonstrable, but it is necessary that the universality of such theory should be shown by results.

With these restrictions as our basis, we can not accept the exhaustion theory, nor the antidotal theory, nor even the tolerance theory, as a safe hypothesis of immunity, but in the absence of a scientific theory, we, as logical and scientific reasoners, are constrained to shelve the legion products of German minds and discourage their methods.

What then is the present status of the treatment of surgical tuberculosis? We have no treatment consequent on Koch's discovery, and our only resources are preventive medicine and the knife. Posterity will chiefly profit by the former, for it takes half a lifetime to teach the laity a simple truth, while we must make the best of the latter supplemented by the restorative and hygienic measures of our fathers.

Under my heading—Surgical Tuberculosis—the conservative surgeon can only consider the bones, joints, lymph-glands, skin, mucous membrane, alimentary canal and genito-urinary organs. Tuberculosis of the lungs, which may be either secondary or primary, and causes 75 per cent. of the deaths due to tuberculosis, we unfortunately must relegate to the domain of medicine, as Dr. Murphy's theories can justly only be considered in the light of a surgical experiment.

Tuberculosis of the kidneys, lymph-glands, prostate gland, mammæ, alimentary canal, ovaries, peritoneum, skin and mucous membrane, calls for early removal of the diseased foci, and, if found necessary, and it can be done, removal of the entire organ. The theory that the removal of tuberculous foci or tuberculous organs

*Read before the Wisconsin State Medical Society, 1899.

would hasten the dissemination and aggravation of the tuberculous process in some other organ or part of the body is not borne out by facts. The surgeon should lose no valuable time in any experimental attempts to save the diseased parts, but pin his hope to the scalpel alone. In abdominal tuberculosis, celiotomy per se has a salutary effect, even if, owing to anatomic reasons, it is not expedient to remove all the tuberculous foci. Any delay or conservatism on the surgeon's part, to courageously cope with the disease, is inexcusable, if not criminal. The same may be said of tuberculous glands. You have no alternative. Remove them if systemic infection is threatened. Once your diagnosis is established beyond doubt, rest not until these repositories of tubercle bacilli have been removed. Be liberal in sacrificing healthy connective tissue and overlook not the smallest focus of infection. Reject all injections, cauterizations, and put your trust in the scalpel.

This brings us to tuberculosis of the bones and joints. What treatment shall we pursue here? If there is no systemic infection and the chronic rapid pulse is absent, put the parts at absolute surgical rest, and close not an eye while you wait for results and trust in the inherent resistance of the patient to the ubiquitous germ. Incidentally I would like to mention that the pulse is the safest index we have as to the active or passive presence of the germ, and I regret that so little attention is paid to the careful taking of the pulse at all hours. Months, often years, before we are enabled to diagnose tuberculosis by physical signs or by the microscope, the rapid pulse should put us on our guard. In tuberculosis of the bones and joints, the inherent resistance of the patient reaches its maximum. Apparently hopeless cases often come out well if the parts are kept at rest, for which iodoform injections later claim the credit.

If in tuberculous disease of the bones and joint systemic infection is threatened, operate at once. Lose no valuable time with parenchymatous injections of iodoform, chlorid of zinc, balsam of Peru, nor experiment with the venous constriction (Bier's) method. If the case is of an epiphyseal origin—and 90 per cent. of these cases are, the joint becoming infected secondarily—cut down to the bone, freely exposing all the diseased parts, and remove all foci under the direction of the eye. Do not trust to chance nor to your tactile sense in this. Be careful in sterilizing the skin preparatory to operating, to prevent pyogenic infection of the tubercular area. In operating on cases of epiphyseal tuberculosis, guard against opening the joint unless it is absolutely necessary that you should do so. Be thorough in your work, and sacrifice time and tissue to gain your ends. Use only dry dressings and allow the wound to heal by granulation and contraction or recession. Arthrectomy and excision should never be considered where the soft parts show manifest indication of disease. Amputate early in all such cases.

TUBERCULOSIS OF THE SKIN.

CASE 1.—N. B., a laborer, married, aged 38 years, and father of two healthy children, comes from a sound family and has always enjoyed very good health. A year ago he accidentally cut his hand with a piece of rusty sheet-iron. Fearing blood-poisoning, he had a friend of his suck the wound for about ten minutes. The wound healed without suppuration. Some time later—exact time not known—he noticed a small sore at the edge of the freshly-healed wound. He gave little attention to it until the sore began to look angry and caused him inconvenience. He consulted his family physician and was advised to keep the wound clean and apply an antiseptic salve which the doctor prescribed. Two weeks later the patient consulted me. I made no definite diagnosis, but told him that it looked like a case of incipient lupus I had seen in a hospital, and advised excision or thorough curettement. The patient did not agree with me, and drifted around begging for a "salve cure" for about a month, when he returned to have me excise the nodulous ulcer. I operated under local anesthesia, using Esmarch's bandage to keep a clean vision of the diseased parts. I freely sacrificed healthy connective tissue, and was rewarded by a complete cure.

The wound healed by granulation and contraction, leaving an ugly scar. The microscope confirmed my fears. Later I learned that the friend who sucked the wound, died with pulmonary phthisis. Natural inference is palpable. I fear that these cases of local infection of the mucous membrane and skin are more common than we are prepared to admit, and that the source of infection can often be traced if we care to take the pains. The prognosis is always good if excision is practiced before there is any involvement of the lymph-glands and channels. Let us do away with such differential terms as lupus, scrofuloderma, etc., and put all this under the heading of tuberculosis of the integument.

TUBERCULAR LYMPHADENITIS: EXCISION OF GLANDS.

CASE 2.—Mrs. L. S., aged 35 years, married, mother of two anemic and sick-looking children, presented the following family history: Two brothers and two sisters succumbed to pulmonary phthisis; also an aunt—mother's sister—died with an obscure lingering sickness. The husband is tuberculous in appearance. As a child the patient was scrofulous—I have no objection to this term when used by the laity, as it stands for a correct and complete clinical picture. For the last three years the cervical glands have been visibly enlarged, and became periodically painful. She grew listless, irritable, anemic, and suffered much with constipation, alternating with paroxysmal attacks of diarrhea. Later she had night sweats and a slight elevation of temperature in the afternoon. Her pulse was accelerated, beating between 90 and 100 per minute. It became an effort for her to climb a stairway of a few steps.

I advised immediate removal of all diseased glands. It was a two-hours operation, for every care had to be exercised not to injure any vital anatomic structure. The glands were removed in one mass, with liberal shreds of healthy connective tissue. Two of the lower glands showed imminent signs of suppuration. These we cauterized after excision and allowed to heal by granulation and recession. The S-incision was sutured. The patient improved immediately, is well to-day, and the most careful examination a month ago—two years after the operation—disclosed no return of physical or rational tubercular symptoms.

TUBERCULOSIS OF THE EPIPHYSIS OF THE FEMUR RESEMBLING SARCOMA; ARTHRECTOMY; AMPUTATION.

CASE 3.—This patient was a youth of 16 years; blond, slim, tall, slightly stooped, and narrow-chested. He had an uncommonly expressive countenance, large eyes, long lashes, and a glossy, fair complexion. He was precocious, warm-hearted and boyish in his affection. Here you had a picture of hereditary phthisis, still the family history was negative. There was no tuberculosis on either maternal or paternal side, nor were any of his remote blood-relatives so affected.

I reluctantly took charge of the case after he had been sick several months. He was, in the very beginning, treated for traumatism of the left knee; later, for several months, for mono-articular rheumatism of the left knee-

joint. This is what I found when I took charge of the patient (I copy from my records): Patient very much emaciated, pale, pulse 120 per minute, temperature 102 F., no cough, no pains in lungs, respiration normal; patient was extremely weak. The left knee-joint was badly swollen, with the tibia flexed on the femur. The joint was freely movable, but not without causing intense pain. It measured five and one-half inches more in circumference than its partner. The knee when at rest gave him severe jerking pains at irregular intervals. He suffered intensely with day and night sweats. The outer side of the knee, including the external condyle, felt healthy to the touch, and so did the patella, though it was fixed. Examination of the inner side of the joint disclosed an alarming condition of the soft parts. The integument had a glossy, white appearance. The condyle could not be outlined. Hard pressure was painful to the patient.

I diagnosed tuberculosis—epiphyseal, without or with secondary infection of the joint, and advised early operation. The disease had made too much progress to permit the consideration of the injection of iodoform emulsion.

The dangers from systemic infection were imminent, and I feared a general deposition of miliary foci along the lymph-channels in the lungs. These fears, however, were only founded on my general knowledge of such cases, and not in any way on any subjective symptoms.

Dr. Louis Nolte concurred in my diagnosis and assisted me in scooping out the tubercular detritus. The disease had made extensive inroads on the soft parts, cartilage and periosteum, and we conscientiously removed all diseased foci, rubbed the large cavity with iodoform, and awaited healing by granulation and contraction.

The patient improved somewhat after the operation and the wound looked encouraging, rapidly filling with what we took for physiologic granulations. However, we were doomed to disappointment. The granulations grew excessive, the venous bleeding became uncontrollable, and the outer side of the knee became involved. It was plain to us that something more had to be done to give the patient a chance for life. We made a few iodoform injections in the outer side of the diseased joint with a view of abating pain; in this we were partially successful. The limb became edematous from venous obstruction, and rapidly grew worse, assuming monstrous proportions. A few days later I amputated the limb at the middle third of the thigh—a few inches from the diseased parts. The amputation was bloodless, and the patient evinced no symptoms of shock. He expressed himself as feeling well a few hours after the operation, and slept well the following night. Everything looked favorable; his temperature fell to normal—the first time in months—he was hopeful and cheerful. His pulse, however, remained high. His appetite improved, and he apparently gained rapidly.

On the seventh day after the operation we removed the dressing and found complete union without even as much as a wet stitch. We were rewarded by a beautiful symmetric stump with the cicatrix well toward the back. A week later the patient began to cough, and a physical examination of the chest disclosed râles—mucous, small and large, all over the lungs. In fact, we had all the symptoms of diffuse bronchitis. The temperature fluctuated between normal and 99.6 F.; the pulse between 110 and 135; the cough was painful, paroxysmal and distressing. The left lung broke down rapidly and the patient died quietly five weeks after the last operation, from miliary tuberculosis of the lungs, hastened by an attack of acute bronchitis.

It is needless for me to add that the microscope confirmed the correctness of our diagnosis, while the macroscopic examination of the amputated limb strongly suggested the possibility of sarcoma, and even at this time it is very difficult for me to reconcile the presence of so much new growth with a tubercular process. The disease evidently began in the periosteum of the epiphysis. The early clinical history points to traumatism as the initiative cause in determining the seat of the disease by exposing a place of little or no resistance to tubercular invasion.

ECTOPIA LENTIS: A REPORT.*

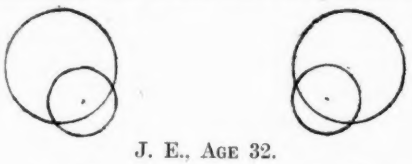
BY C. P. PINCKARD, M.D.

Professor of Ophthalmology, Post-Graduate Medical School; Attending Ophthalmologist Michael Reese Hospital Dispensary; Fellow Chicago Academy of Medicine, etc.

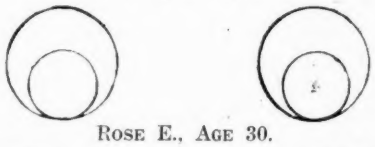
CHICAGO.

In 1893 I had the opportunity of examining two cases of dislocated lenses and of reporting them to this Society[1]. Briefly, they were as follows:

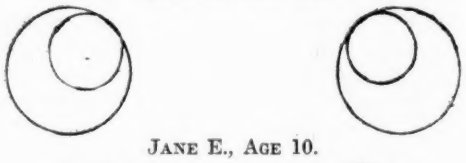
Mr. J. E., aged 32, had always had poor vision, which examination showed to be in the right eye, $+9.50=.1$; left eye, $9\bigcirc+1.50c.$ ax. $100°=.5$. Examination with the ophthalmoscope revealed both lenses dislocated downward and inward about 2 mm. below the pupillary center. In addition, both lenses showed spicules of opacity.



J. E., AGE 32.



ROSE E., AGE 30.



JANE E., AGE 10.

RACHEL, AGE 5.

Miss Rose E., sister of the above, had vision in the right eye, $-27=.2$; left eye, $-30=.1$. She was wearing -22 in both eyes. In her case both lenses were dislocated directly downward, but not far enough for the edges to be out of the line of vision. The high myopia was due to the fact that the lenses were much more convex than normal.

At the time of this examination it was stated that Mr. E. had a daughter, aged 4, who was very "nearsighted," but I was unable to examine her.

In August, 1899, Miss Rose E. came to see me, bringing two nieces, the daughters of J. E., because they could not see well. On examination the following conditions were found: Jane, aged 10, vision in the right eye, $-16=.2$; left eye, $-18=.2$. The ophthalmoscope

* Read before the Chicago Ophthalmological and Otological Society

1 Med. Standard, Chicago, February, 1894, p. 33.

showed both lenses dislocated upward and inward, but the borders still in the line of vision. Both lenses were free of opacities. In Rachel, aged 5, it was impossible to get vision, as the child was exceedingly shy and lacking mentally. With the ophthalmoscope both lenses were seen to be dislocated upward and outward, but out of the line of vision, and the refraction was highly hyperopic. There is another child, Tom, aged 6, whose vision is said to be all right.

These four are only one of many series that have been reported as showing the effects of heredity on the development of the eye. It is impossible for us to explain the peculiarity that causes the unequal length of the suspensory ligaments, nor why it should be too long above in one case and below in another. If we may assume, as has been done in several reported series, that the poor vision of the mother was due to dislocated lenses, we have here three generations with the same anomaly.

To return to the first two cases, it was pointed out in the report made in 1894, that the dangers of such a condition lay in the possibility of the lens becoming loosened from its attachment to the ciliary processes by the atrophy and rupture of the suspensory ligament; and in the liability of such lenses to become cataractous, owing to the poor nourishment.

It will be remembered that it was stated in the report that the lenses of J. E.'s eyes showed spicules of opacity. Since 1893 this opacity has gradually increased, so that both lenses are now opaque. This perhaps would not be of much importance to him, as the lenses were out of the line of vision, were it not that the other possibility, that is, the rupture of the suspensory ligament, has also taken place in the left, the useful eye.

Strange to say, the zonule ruptured below, that is, on the short side, leaving the attachment to the ciliary processes only a narrow band to the upper and temporal portion. When the zonule gave way below, the lens was drawn up by the tension of the unruptured upper portion, so that the opaque mass was placed in the line of vision and the sight was reduced to perception of light. Mr. E. discovered, however, that if he bent his head far to the left or far back, the opaque lens floated out of the visual line, and he could see again as well as ever. But soon after assuming the normal position, the lens again came back behind the pupil and the vision was reduced to perception of light. Besides the terrible annoyance of such a condition, a great danger threatens this patient's eyes, from the irritation set up by the floating lens, through pressure on the ciliary processes. Already he has had several attacks of pain, lachrymation and redness, showing that a cyclitis is developing, which may destroy not only the left eye, but also the right.

In 1893, Miss Rose's eyes showed the lenses dislocated downward, but the edges still in the line of vision, and the refraction highly myopic. About 1895 she found that she could see much better without her glasses than with them, and in 1896 she consulted an oculist in another city, who prescribed +8.50 for both eyes, and she has worn these ever since; that is from being highly myopic, she became highly hyperopic. I examined her eyes again in August, 1899, and found that the zonules of both eyes had ruptured above, allowing the lenses to sink out of the visual line, that is, the long side of the zonule ruptured in this case instead of the short side, as in her brother's. The rupture, however, is not as yet very extensive apparently, so that there seems little danger from pressure on the ciliary processes. Nor is there any effect like a "trap-door," as in her brother's case. Also, these lenses, free of opacity in 1893, now show many lines of opacity extending from the periphery toward the center.

The question of treatment in Mr. J. E.'s case is a simple one. The lens must be removed; but the operation is a very difficult one, and there is great danger of doing damage to the eye. The difficulty lies in getting hold of the lens in order to extract it. Being loose, it is sure to float out of sight if not fixed behind the pupil before the eye is opened, or the patient placed lying on his stomach, so that the lens will float into the pupil, the operator working from below. I am inclined to use the Agnew bident for fixation, and hope to report a successful extraction in the near future.

It is only fair to assume that the lenses in Miss Rose's eyes will slowly become more and more separated from the ciliary processes, and I am in doubt as to what course to advise. Extraction at present would be much easier than when luxation is more advanced, yet if I could be sure that no further luxation would take place, I certainly should not advise operative interference. For a time at least, they will be carefully watched for evidences of further rupture.

The outcome of these two cases being so characteristic of certain changes in the zonule, warns us to be careful as to our prognosis in the case of the children. So far as could be seen at the time of examination, neither of the children's eyes showed any evidence of stretching or rupture of the zonule beyond what one would expect from the luxated lenses.

EXTENSION MASSAGE OF THE OSSICLES WITH A NEW AURAL MASSEUR.*

BY HAMILTON STILLSON, M.D.

SEATTLE, WASH.

The fibrous bands thrown across the middle ear in hyperplastic otitis media form for the aurist a "pons asinorum." When a sclerotic case presents itself we usually break to the patient the interesting intelligence that nothing can be done for him. Politzer[1] says: "adhesive inflammation of the middle ear does not admit of a restitution of the function of hearing." Gruber[2] says: "the prognosis in plastic inflammation of the middle ear is upon the whole unfavorable." Dench[3] assures us: "the usual course is steadily progressive."

Yet it is the busines of the aurist to benefit such cases. And it has always seemed to the writer that the various operative procedures suggested and practiced by various aurists for the relief of these cases were futile because irrational. Certainly all aurists agree that ankylosis of the foot plate of the stapes with the bony wall of the fenestra ovalis is inoperable. Logically an ankylosis between any two of the ossicula would also be inoperable—or rather let us say that any operation to succeed would look to the entire removal of the offending ossicula. Such an operation "proves too much." It is much more rational to endeavor to absorb the ankylosis while saving intact the natural structures.

Such effort is made in the use of the instrument described in this paper. It is constructed as follows: A soft iron "core" is wrapped in a coil of insulated wire and enclosed in a cylinder. Near each end of the core is placed a metal diaphragm which has air-tight packing between the edge of the diaphragm and the cylinder.

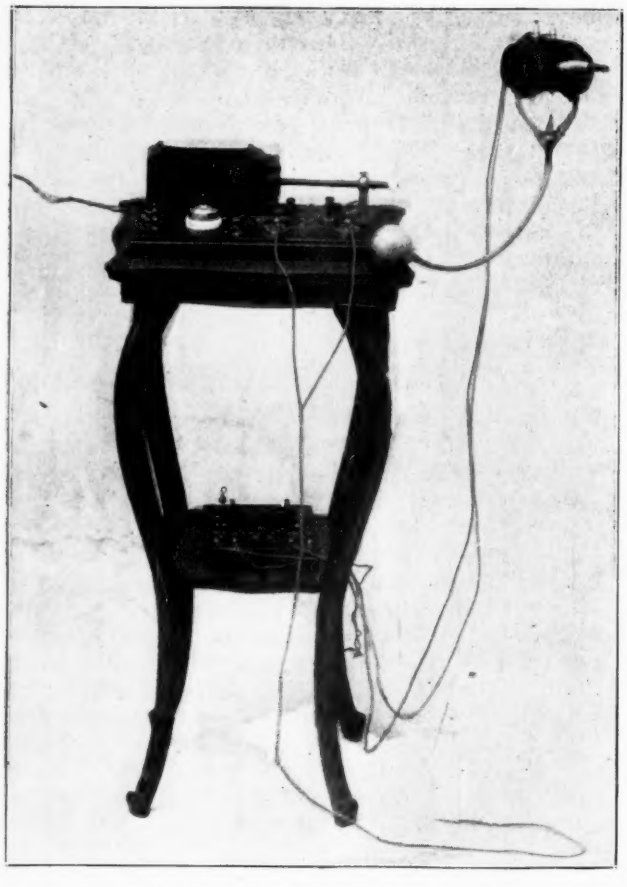
*Presented to the Section on Laryngology and Otology, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

[1] Diseases of the Ear, p. 354.

[2] Diseases of the Ear, p. 401.

[3] Diseases of the Ear, p. 380.

The ends of the cylinder are sealed, leaving an air-chamber between the diaphragm and the ends of the cylinder. There are thus produced three air-chambers, the central one, the one between the diaphragms, enclosing the magnet, and one at each end of the cylinder between the diaphragms and the ends of the cylinder. Leading from the central one is a tube which ends in an ear nozzle. Manifestly, if an interrupted current of electricity be sent through the coil, the diaphragms will be alternately attracted and released. Since both are attracted at the same time, the air in the central chamber will be compressed from both diaphragms and forced outward through the ear nozzle. When the current is released, both diaphragms will spring back into place, compressing the hitherto rarefied air in outer air-chambers and rarefying the air in the central chamber. This to-and-fro movement in the diaphragm thus causes a pumping



or churning of the air in the ear nozzle. The rapidity of the movement will depend on the rapidity of the vibrations or interruptions in the current, and the length and strength of the stroke will depend on the size and tension of the diaphragms. To regulate the rapidity of the interruptions to the current, an interrupter is thrown into the circuit, consisting of a soft iron core wrapped with insulated wire and having a vibrator at each end. On one of the vibrators is a projecting rod with a movable weight. The rate of its vibrations will thus depend on the position of the weight on the rod, slow when the weight is near the outer end of the rod and fast when near the magnet. For a battery, a few dry cells suffice. The regular Westinghouse alternating current with a suitable "transformer" offers a most excellent current.

There remains one very important part of the apparatus yet to be described, and that is the means of putting the ankylosis or adhesive bands on stretch while such ankyloses are being vibrated. Connected with the air-chambers, and hence with the air in the ear nozzle, is a stout rubber bulb which is compressed just previous to the nozzle being inserted into the external auditory meatus; and when the nozzle is thus inserted into the meatus, hermetically closing the meatus, the bulb is released, thus sucking the membrana tympani more or less forcibly outward. Any vibrations of the air in the external meatus would then vibrate the membrane and the ossicula and the ankyloses and the adhesive bands *while they were already on tension.* This is one of the distinctive features of the instrument and one of its principal advantages. In all the many forms of instruments known to the writer that are used to create vibrations in the membrana tympani and its ossicula, none of them do more than to vibrate the membrane to and fro. But the membrane, if it be flaccid, can flap to and fro without vibrating the ossicula in the least. The instrument above described first puts the offending sclerosed tissues on the stretch and then more or less rapidly jerks them loose, so to speak. If, as sometimes appears desirable, the tension should be inward instead of outward, the operator has only to compress the bulb after inserting the nozzle, instead of releasing it as described above. The membrana will thus be pushed inward, where it may be vibrated. In all cases of ankylosis of the ossicula, this latter procedure is to be occasionally used.

I have used this instrument for the last ten years, modifying it in some particulars from time to time, and in its present form it is giving most excellent results. Tinnitus not due to congestion is often quickly relieved. The hearing distance in suitable cases increases steadily, and in cases of recent standing a few applications sometimes suffice to restore the hearing. Other indications besides the scleroses mentioned have to be met by suitable treatment in conjunction with the use of the instrument, and in old and very chronic cases the applications have to be repeated for a long time. But by properly selecting the cases for its application, and by persistently and intelligently applying it, the instrument will be found very beneficial in a hitherto almost hopeless class of cases.

SARCOMA OF FACE AND TEMPORAL REGION.

EXCISION HEMORRHAGE CONTROLLED BY TEMPORARY CLOSURE OF THE COMMON CAROTID ARTERY BY MEANS OF A COMPRESS AND LIGATURE.*

BY JOSEPH H. BRANHAM, M.D.

BALTIMORE.

Peter R., colored, aged 32, single, was admitted to the National Temperance Hospital of Baltimore, September 20, 1898. His family history is unimportant, none of his ancestors, so far as can be learned, having suffered from malignant growth.

He had had the usual diseases of children. When 14 years of age, he noticed a swelling on the left side of the lower jaw; does not remember that he had received an injury on this part of the face. This gradually grew until he was 19 years of age, when it was nearly as large as a man's fist. At this time he entered the City Hospital of Baltimore and had the left part of the interior maxilla, from the symphysis, to the upper part of the ramus, removed—the operation was done by the late Prof. O. J.

*Presented to the Section on Surgery and Anatomy, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

Coskery. I assisted in the case. Six years later he returned to the City Hospital and had a small growth removed from his left superior maxilla.

He entered the hospital for the third operation in the spring of 1894, and in June of that year I removed the left superior maxilla, together with part of the palate bone and the pterygoid process of the sphenoid. After this operation, he states that he remained well, till less than a year ago. While riding an unruly horse, he was struck violently on the left side of his face by its head. After this the large external growth which occupies the zygomatic and temporal regions began to grow. Several months later he was struck under the eye by a base ball and the smaller lump below the orbit appeared. At the time of operation the growth or growths, as there seemed to be two, were of large size, measuring about six inches from above downward and nearly the same from side to side. The external larger growth was firm and elastic, while the inner smaller one was soft. Just below the larger was a firm hard mass the size of a hen's egg, which was the stump of the inferior maxilla, surrounded by thickened periosteum.

Operation was performed September 12, 1898. The parts were carefully prepared by shaving, scrubbing and the usual antiseptic measures. Chloroform was given. The first stage of the operation consisted in cutting down on the common carotid artery, opposite the lower end of the larynx.

The inner border of the sternocleidomastoid was used as the guide. The upper part of the incision was carried outward to avoid the anterior jugular vein, which was large and crossed toward the mastoid process above; the artery was easily isolated, and a large catgut ligature was passed behind it by means of an aneurysm needle. A small sterile compress was pressed on the anterior surface and the circulation controlled by drawing the double ligature against the compress; this device, which was managed by an assistant, worked with entire satisfaction. A long incision was now made from the upper to the lower border of the growth and a shorter one from the middle of this below, to the inner angle of the orbit. The large external mass was now dissected out. It involved the entire temporal fossa, replacing the temporal muscle. It had destroyed the zygoma, part of the malar, and the external angular process of the frontal bone. It involved the tissues of the cheek, invading the mucous membrane of the mouth. Most of the tumor consisted of firm, elastic, flesh-colored tissue, but near its center a considerable and calcareous degeneration was noted. The smaller growth was separated throughout from the larger, by a capsule. It projected from beneath the orbit and extended far back beneath the base of the skull into the sphenomaxillary and sphenopalatine fossa. In removing this part of the growth the hemorrhage was profuse, but was readily controlled by gauze pressure. The hemorrhage during the rest of the operation was slight and was simply oozing.

The deeper part of the wound was packed with sterile gauze, and the usual antiseptic dressing applied after suturing the wound. The subsequent history of the case was remarkable for the rapid convalescence: He was shocked at first, but rallied rapidly after several hypodermic injections of strychnia and the application of hot-water bottles. The wound was dressed on the third day. The patient was up on the fifth day and was out of the hospital on the eighth.

The various specimens removed from this patient at the several operations have been pronounced by the examining pathologist to be spindle-celled sarcoma. The growths in the lower and upper jaw were evidently from different sources, and could not be recurrences, while the three later tumors probably were local recurrences. The mass under the eye seems to have been independent, and was probably a new growth unconnected with any of the preceding foci.

My reason for thinking that this was so, was that the mass was encapsulated and high up; that it came on rapidly after injury and began 3½ years after the removal of the upper jaw.

This patient's history presents many points of interest, illustrating the tendency of malignant growths to recur in the same parts—local recurrence—and in neighboring or remote parts of the body, which can only be explained by a predisposing tendency to this disease, or by accepting the theory of the infectious nature of malignant disease.

The most important thing in connection with the case was the manner of controlling the hemorrhage during the operation; the size and position of the growth made excessive hemorrhage inevitable on attempting its removal.

The great danger of excessive hemorrhage adding to the shock, indeed probably causing some of the dangerous symptoms usually attributed to that condition, and also, by lessening the tissue resistance, predisposing to the various forms of septic infection, makes the conservation of the blood in important operations a matter of the greatest moment.

The device used in this case worked with such absolute satisfaction that I believe it will be often employed in similar cases.

The only hemorrhage of moment occurred when the operation was extended far back under the base of the skull near the median line, when the blood-supply was almost equally from the opposite side. The short duration of the shock and the marvelously rapid recovery of the patient show the great advantage gained by the blood-saving method employed. The incision necessary to close the artery when made and closed without infection adds very little to the gravity of the operation.

The great danger of secondary changes in the brain which cause serious symptoms in about 33 per cent. of cases, and almost as large a percentage of deaths after ligation of the common carotid artery makes that operation one never to be used if it can be possibly avoided.

Will temporary closure of the artery cause such results? On the answer to this question will depend its employment in such a case as I have reported. Only its use in a large number of cases can decide this fact.

In old people or in those suffering from premature sclerosis of the arteries from any cause, I would not employ the operation because even temporary closure of the artery in such conditions might lead to thrombus in the cerebral vessels and precipitate softening of the brain, or the brittle coats of the vessel might break with similar results from embolus, or be followed by aneurysm from the injured arterial walls; employed in young people with healthy arteries and with the necessary care, so that the wound is kept surgically clean and the coats of the vessel are not impaired by drawing the ligature too tight, I feel sure that these dangers, if present at all, are extremely slight. That temporary closure of an artery has no tendency to cause the formation of clots in its caliber when walls are not broken has been demonstrated by the experiments of many surgeons—Murphy Johnson and others. The only other danger then is the injury of the vessel wall, which can be avoided by the use of a large-sized ligature and compress, applied so as

not to bend the vessel or pull it out of its normal position, (I used a large catgut ligature soaked in sterile water and applied double), and the possible effect of the temporary cutting off of the cerebral circulation, I am sure is very slight, if it exists at all.

On the other hand, the advantages of this method are very great. In addition to prevention of excessive hemorrhage by putting the local circulation under our control, it enables us to make a more careful and thorough dissection, decreasing the danger of leaving infected parts and thus not only decreasing the immense danger of the operation, but by lessening the probability of local recurrence, also diminishing the remote dangers.

CITY MILK ROUTES AND THEIR RELATION TO INFECTIOUS DISEASES.*

BY ERNEST WENDE, M.D.

BUFFALO, N. Y.

We are no longer in a land of conjectures and surmises in dealing with city milk routes and their relation to infectious disease. They concern the municipality. No matter how efficient its sanitary arrangements, the urban population can not be kept free from the poison of communicable disease so long as supplied with infected milk from the rural districts. They concern the municipal health officer in particular, and from the point of view of epidemiology are important.

We possess evidence perfectly understood, gained by experience, bearing potentialities for evil which are unbounded in the dissemination of the virus of diphtheria, scarlet and typhoid fever. Numerous records of such epidemics are at hand in which the spread of infection was definitely traced to the dairy and its surroundings, contracted from the mouth, nose, throat, skin, and discharges of those in attendance, recently convalescent or scarcely recovered. Thus the materies morbi, which is very tenacious of life, clings to the hands and clothes of the careless, who in turn pollute the water and then cause it to be lodged in the cracks, crevices, seams, and inequalities of the walls, floors, and surfaces of the insanitary milk-house, storage box, cans, and bottles, there to thrive and multiply for the transmission to do infinite mischief and the slaughter of the innocent. Notable among these outbreaks we may mention the 95 described and tabulated by Hart of England, of which 48 were typhoid fever, 32 scarlet fever, and 15 diphtheria, and the 90 collected and tabulated by Freeman of this country, of which 53 were typhoid fever, 26 scarlet fever, and 11 diphtheria.

To confirm, as well as for the purpose of supplementing, these numerous instances of the spread of infection by an improper milk-supply, 5 outbreaks, parallel in relationship, of which 3 were typhoid fever and 2 scarlet fever, that occurred in the city of Buffalo since 1893, may be profitably cited. It was in the fall of this year that we encountered our first visitation of a contagious disease traceable to and rapidly extending through the instrumentality of a milk dealer's route. Here, likewise, the seeds of infection were brought to the persons unfortunate enough to come in contact with the contaminated milk from a remote center, and at the first opportunity these individuals infected others, and so the evil spread. It was occasionally observed that a group of scarlet-fever cases existed in such association that it was seemingly apparent, according to every reasonable expectation, that they all depended on a like source of infection. An investigation was at once instituted, which revealed the fact that 57 children of 26 separate and distinct families had succumbed to scarlet fever, all of whom had procured their milk from the same milkman, whose milk-house, equipments, health and family were all scrutinized with the result of finding two cases in his immediate household.

Inasmuch as nothing could be discovered of an insanitary or causative nature with his own outfit, environment, and mode of handling, the inquiry was further carried to the source of milk production—the dairy farm—with the sequence of detecting two cases of scarlet fever in the desquamating period, occurring in a child aged 7 and in a young man of 19 years. The latter, who still had large flakes of cuticle peeling from the extremities, must be credited with his share of the misfortune, for devastation followed the wake of his labor. He, before being thoroughly restored, ignorant of the danger caused by the stray particles of shed epidermis thickly peopled with the infective bacteria or their spores, did the milking, washed the cans and transported the commodity to the depot for shipment, to be received and distributed to the unsuspicious consumer by the city milk dealer.

Here, then, the first demonstrable milk epidemic of scarlet fever in our midst showed a typical case. The interesting and subjunctive corollary deduced from the research is convincing: 1. All the facts brought out by a persistent investigation of the epidemic pointed to the milk-supply. 2. The cases appeared almost simultaneously, extending rapidly and especially attacking those who partook freely of the lacteal fluid. 3. Only the homes located on a certain milk route were invaded and those frequently having the best hygienic environments. 4. Happily, the wane of the epidemic was equally abrupt following the discontinuance of the mischievous product.

Briefly, this is the unvarnished tale concerning our first recognized outbreak of scarlet fever caused by a contagious poison emanating from a doubtful milk-supply. However, it shed much light on the milk dealer's route as a channel for the dissemination of disease and served as a stimulus as well to yet more carefully scrutinize and guard the milk traffic. The most important practical result of this inquiry was the devising and maintaining of a register of contagious diseases in connection with their occurrence on these thoroughfares.

It is scarcely an exaggeration to say that the assigning of all acute infectious diseases that arise in a municipality to the milkman is an act consistent with the maintenance of health. It means a system feasible for daily surveillance and effective in the protection against frequent infection of the milk-consuming denizens. Such a register is worthy of more than a passing notice. It stands as a silent guardian, watchful of the integrity of milk, the health and happiness of the home. No department of health can be considered efficient, much less complete, without it. This armamentarium, when once adopted, will be the last to be dispensed with, for few things accomplish so much that are apparently so simple. Chemical analysis has a place, bacteriologic tests another, but the register takes the place of all in its importance and possibilities. We may fairly attribute to this innovation the detection of the four subsequent epidemics, in their incipiency. It made immediate investigation and the prevention of the further spread possible. We can not be too thankful for this result and we ought not to neglect its obvious lessons. In city milk routes much remains to be done in order to bring

*Presented to the Section on State Medicine, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

the sanitary conditions to a level with our knowledge. We can not plead ignorance: apathy and indifference are the foes most to be dreaded.

On Sept. 4, 1894, we were assured by the records of the register that nineteen cases of typhoid fever had developed with wonderful rapidity in families served by a milkman living in a sparsely settled section of the northern part of city. The Health Department forthwith instituted an investigation which showed the startling result that the wife of the milkman, surrounded by unfavorable conditions, was ill with the fever, however, on the borderland of recovery. She was still being nursed and cared for by the husband, who, likewise, was handling the milk and washing the cans in a most objectionable manner, with water procured from an old cistern that had, during the preceding year, been the subject of several sanitary complaints. Another powerful factor that made the transmission of the disease, through the medium of the milk, eminently capable, was the fact that the patient was not isolated but cooped up in a small stuffy chamber joining the kitchen, in direct communication with the milk-room. It is hardly necessary to state that the sale of milk was interdicted, the cistern ordered abandoned, disinfected and filled, and everything pertaining to the dairy and the premises in general placed in a sanitary condition. By this and other procedures, the spread of the disease was checked, no further case occurring on the route.

On Aug. 21, 1895, the Department again, through the intervention of the register, discovered eighteen cases of typhoid fever intimately associated with the milk route of a dairyman located on the outskirts of the city. An inquiry into the causes and circumstances of the outbreak revealed that his premises were not what they should be by reason of defective drainage and a badly constructed, ill-ventilated and unclean milk-house, conditions, as might be expected, most favorable for the reception and multiplication of the typhoid bacillus. The peculiar interest connected with these cases was that the wife of an employee had propagated the infection that had contaminated the milk through the agency of her husband, who, at night, not only acted as nurse but fulfilled all the other necessary household duties, and who, during the day, handled and delivered the needed product to the confiding consumers, without changing his clothing for days, or taking any precaution whatever. The sick wife was immediately removed to the hospital and the insanitary conditions so promptly changed that, by August 30, just nine days after the discovery of the first, no further cases were reported.

Again, on March 9, 1896, the register indicated the existence of fourteen patients affected with typhoid, on the route of a milkman residing in the western portion of the city. Here we acquired the information that the milk-room was in the rear of the first floor of the building which he occupied. Several months previous, a case of typhoid developed on the floor above, in a separate family, and ran its full course. These cases undoubtedly arose in consequence of the insanitary conditions prevalent in and about the building, and for like reason the contagion remained active until finding expression in the dairyman's route. A quick subsidence of the epidemic followed the suppression of the milk, thorough cleansing and disinfection.

On Feb. 27, 1899, in consequence of the rapid development of scarlet fever—some twenty cases within four days—an investigation was made and the source of the trouble traced to a dairy farm near Clarence, N. Y., twenty miles from the city, from where the milk-supply was received. It was ascertained that, at this place, four persons were infected with scarlet fever, one of whom, a convalescent, was, through ignorance of the danger and possibility of his acts, engaged in milking the cows, handling the cans and other utensils. Action was at once taken to prevent further injury through the milk, with the result of arresting the further development of cases by March 15, when but four cases were reported. No further cases were then reported until April 4, 1899, when we received reports of two additional, these being the last.

No better illustration could be found to demonstrate the condition liable to develop in any section in the present state of affairs, nor to demonstrate the value of this, the sanitary tell-tale or milk register.

In addition to the tell-tale register of infectious, contagious endemics indigenous to the dairy, it is unlawful to serve bottled milk to a household where contagious disease exists, or to remove from such a dwelling any bottle or receptacle which has been, or is to be, used for the purpose of receiving or storing milk, or to bottle or prepare for delivery any part of the milk-supply while on the delivery wagon or at any place other than the milk-house.

The recognition of the fact that every community has an interest in the health and well-being of its individual members, and that concerted action is necessary in order to obtain practical results, therefore, makes universal care and steady perseverance imperatively requisite to prevent the occurrence of epidemics.

Of late, the sphere of protection has been enormously enlarged, and there is much ground for hope that, by methods similar to those of the diagnostic register, which positively gives the cue for the early detection and suppression of contagious outbreaks current on the milk-dealer's highways, further immunity may be attained against disease propagated by impure milk.

In conclusion, the Department of Health in Buffalo has, from time to time, adopted, under my direction, a scrutiny, incomplete as it may be, briefly as follows: A record is kept of the conditions that prevail at each dairy supplying the city with milk. This information is obtained solely by inquiry, but has been found generally reliable. It includes data of the size, health, tuberculin examination of the herds, character of the water, food, health of employees, methods of milking, cooling, cleansing, transportation, in fact all factors bearing on the purity and protection of the milk. Additionally, circulars are caused to be sent, bearing on the possibilities and the like of the business. When conditions at the dairy appear prejudicial to the public health, from any cause, investigation is made and correction requested. In the absence of authority beyond the municipal limits, when action for any cause appears necessary for insanitary reasons, for failure to comply with the department's request, the product of such a dairy is interdicted at the city line, and the dealer to whom it is consigned, notified, until such time as the offense is removed.

With this mode of procedure and its results, any city can exercise a large influence on dairies supplying it, exclude milk from known tuberculous herds and obtain sanitary protection beyond its own field of authority.

DISCUSSION.

DR. A. WALTER SUITER, Herkimer, N. Y.—I regard the subject as quite exhausted by my friend, Dr. Wende. This interesting effort in public sanitation, which he has so intelligently disclosed, is a great innovation. Without doubt, when this plan of registration is generally understood and practiced, it

will bring about material progress in the matter of the early discovery of epidemic outbreaks of infectious disease in cities and towns. It occurs to me that there is a great opportunity for more effective work along this line of sanitary administration; that often where careful precautions are taken in some respects, certain other precautions might be observed to make the service more complete and beneficial, and I was very much pleased to note in the Doctor's paper that he has not only required the registration of the source of supply and the route, but he also makes the point that all utensils, bottles and other materials that are used in the distribution of the milk shall also be registered, in order that the search for the origin of the outbreak may be made with the utmost accuracy. That is one of the most important recommendations of his paper, and is unquestionably one of the best points in the system he has inaugurated. Following this, the best means can be taken to prevent the dissemination of the infectious elements and the consequent continuation of the outbreaks.

DR. GROSSE—I would like to ask the Doctor about how much authority he has in controlling the milkman's premises outside the city precincts.

DR. H. Z. GILL, Topeka, Kan.—We had considerable to do with that question during the last year in our work on the tate Board of Health. In visiting the dairies within a radius of three, four or five miles of Topeka, and some inside the corporation, we found that there was a condition that was anything but desirable; and that the city authorities had taken no cognizance of the condition at all, and the only examination that was made of the milk was to find out the amount of cream that milk contained, which plan was utterly insufficient to demonstrate whether the milk was as it should be. After having ascertained the condition of these dairies, I made a somewhat lengthy report to the city council. That report was referred to the committee on hygiene, and together with the Board of Health of the city, we formulated an ordinance.

As to the control of the dairies outside of the city, the ordinance states that if the proprietors refuse to be inspected or investigated by the register or food inspector, their licenses shall be withheld. So we control them in that way, and we think we have the matter in such shape that we can compel inspection and thus control the conditions of the dairies within as many miles as we choose to go out and investigate them. But that work had to be started and carried on through the State Board of Health; otherwise it would not have been done. And all health officers must understand the importance of the conditions of the dairies that supply the cities with milk.

DR. E. WENDE, Buffalo, N. Y.—Not having the requisite authority to inspect and supervise the dairies that supply the consumers in Buffalo with milk, we have devised our own plans for preventing the sale of any suspicious article within the confines of the city, by a speedy and effectual disposition in interdicting it at the city line or at the depot. I regret that this action on the part of our municipality should be necessary, owing to the inadequate protection given us by the State Board of Health, which is largely advisory and not mandatory. I hope that, in the State of Ohio, the powers of the State Board of Health exceeds those of New York. This plan has operated exceedingly well with the Department in compelling the producer to submit to inspections by our municipal health officials, however, at times reluctantly.

DR. B. STANTON, Cincinnati, Ohio—The Ohio State Board of Health, unfortunately, has no jurisdiction as to matters of that kind, but here we have just the same power that they are exercising in Buffalo. The cities of this state, the towns, and incorporated villages have health boards, and they have control of the milk distribution, and in nearly all of the cities dairymen are required to register. Should they refuse the health authorities permission to inspect their dairies, or to regulate them as if they were in the corporate limits, all a board of health has to do is to refuse to grant a license to that dairy. It is a matter just as easily controlled in Ohio as in Buffalo. It is just as easy to control dairies outside the city, or outside of the county, or outside of the state, as it is to control those in the corporate limits, in this manner.

DR. E. WENDE—I think the importance of this registration can not be overestimated. The city and state now annually spend large sums of money for the analysis of milk. This expenditure would be more judicious were it applied to prevention rather than detection of merely a commercial fraud, which means only the protection of the pocket against a little water. My practice and aim has been the prevention of infection, the insuring of sanitary protection, and in this way disarming its bearing on contagious disease, and thus far I have succeeded in doing so most satisfactorily. The milk route registration and its relation to contagious disease is of far more avail to prevent infectious diseases than you have any idea of. It does more than all the bacteriologic and chemical examinations together, while it has the practical feature of costing almost nothing.

Another thing which I have observed in many cities, although not in Columbus, for I have not looked into the matter here, is that but very little supervision of the milk industry is given, and that not of the character nor amount that its importance deserves. In this respect, Buffalo is in advance, and we are very proud of the purity of the milk-supply and the way it is maintained. All that has been accomplished has been done in the past six or eight years. Up to that time we had cow barns in the city, in connection with milk dairies, which are now removed. This was only accomplished after a fight and opposition, as you can imagine. Under our system, no man can go into the milk business now unless he gets a permit from the Department of Health, and a license from the mayor. This license is not issued until the rules of the Department of Health are complied with, and the conditions what they should be. Formerly we found milk-houses in all sorts of bad sanitation; some even located over sewers, with their milk-cooling boxes plumbed without any trap, vent or proper plumbing safeguards, or the milk boxes themselves placed near an old privy vault or near a stable, and what not. Now, on the contrary, there is a uniformity of requirement; milk boxes have to be lined with metal; raised off the ground; and not placed against the wall; and have to be properly trapped and vented, etc. The milk-house itself has to be in a separate building without connection with a stable or any influencing building. These are some of the features that have been corrected, and one of the ways in which we have diminished the danger to Buffalo from infectious disease.

One feature of excellence which we have introduced is that whenever an infectious disease occurs in the city, the dealer supplying the family is ascertained and the case charged up against his particular milk route. This is done whether he is guilty of causing it or not. The physicians report all cases of contagious disease immediately, by telephone, and not by postal card three or four days later, as was formerly the case here, and is yet customary in many cities. A note is immediately made of this reported case, and an inspector is sent to the place; one of his first and most important duties is to ask, and ascertain and report on, "Who is your milkman?" With that report we keep our register and the case is charged as stated, against that particular milkman.

In case of an outbreak of contagious disease, if there is anything wrong with the milk, the spread of the disease occurs along that route with peculiarly wonderful rapidity. Ten or eleven cases may be reported in one day, an equal number the next, and so on. By our method, however, the source of the trouble can be traced and located with almost equal rapidity and positiveness. The milk is then interdicted, and the epidemic, so far as that route is concerned, at once stops.

DR. A. R. REYNOLDS, Chicago—You say there are no cow barns in Buffalo. Does that mean that there are no single cows kept?

DR. E. WENDE—I mean cow barns connected with milk houses; we have an ordinance that a man can keep but one cow in the city of Buffalo on one lot. If he keeps two cows he has to have an additional acre for every cow. In that way we practically exclude cow barns from the city; and even a private individual has to get a permit for the keeping of that cow; and he has to pay the city $1 for that permit.

DR. C. O. PROBST, Columbus Ohio—I would like to ask the Doctor whether they get any information of contagious disease in the dairyman's family.

DR. E. WENDE—No, not by the register.

DR. C. O. PROBST—But in some other way?

DR. E. WENDE—Yes, after we have finished our investigation, in the city and find nothing wrong, we turn our attention to the country, carefully investigating every source of supply, including the dairyman's premises, family and help. If the cause be located, we prohibit the milk from that dairy from entering the city until all danger is over or the evil remedied.

TYPHOID FEVER IN A LEPER, FOLLOWING IMMEDIATELY BUT ACCIDENTALLY ON TREATMENT WITH ANTIVENOMOUS SERUM.*

BY J. F. SCHAMBERG, M.D.
PHILADELPHIA.

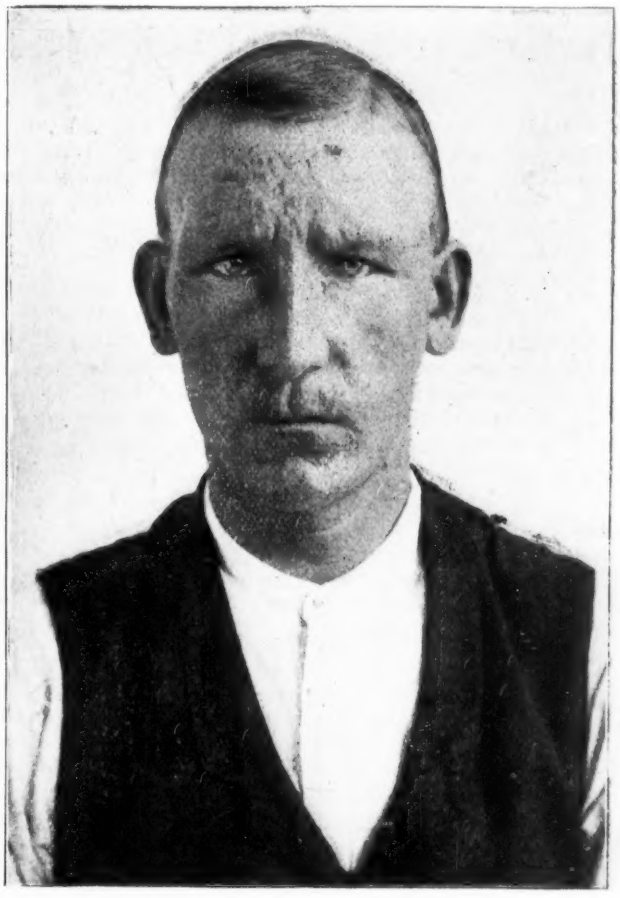
The following report is deemed worthy of presentation because of several unique features connected therewith. Whilst there is no reason why lepers should not, if exposed, contract typhoid fever, there seems to be, as far as I have been able to ascertain, no recorded instance of the simultaneous existence of these diseases. Furthermore, several eminent leprologists, to whom an inquiry as to the incidence of typhoid fever among lepers was addressed, have replied that they have never noted its occurrence. A letter received from Dr. G. Armauer Hansen, Bergen, Norway, says: "Since 1868 we have not had typhoid fever here, and consequently I am unable to give you any information on this question. I have seen an epidemic of measles and this malady run the same course amongst the lepers as among others."

The fever in the present case developed after the use of injections of antivenomous serum. In 1897, Dr. Dyer of New Orleans, La., read, before the International Leprosy Congress at Berlin, a preliminary report on the use of antivenene in leprosy. In this he stated that he had employed injections of Calmette's serum in five cases of leprosy, in four of which marked improvement had taken place. In one there was practically a disappearance of the lesions present, and of other evidences of the disease. In one the result was negative. In this case the "age and frailty of the patient were to be considered."

Through the courtesy of my friend, Dr. William M. Welch, chief of the Municipal Hospital for Infectious Diseases, Philadelphia, I was permitted to employ this treatment on a leper there resident. The history of the patient is as follows: M. P., aged 25, a sailor, and a native of Oesel, a Russian island in the Baltic Sea, has mixed leprosy of nine years' standing. The face, particularly the forehead, is studded with twenty-five or more pinhead to cherry sized bronze-colored nodules. The region of the eyebrows is bereft of hair. The ears are somewhat thickened, although no distinct nodules are present. The face is reddened as a result of the presence of numerous fine telangiectases. The conjunctivæ are permanently injected. The gums behind the incisor teeth are superficially ulcerated, and a circumscribed area much resembling a mucus patch is situated on the right soft palate. The patient has been subject to swelling of the legs for over four years. In the beginning the hair was lost from the legs, which then became harsh and dry. Burning was noticed in 1890, eight years ago. Upon the thighs, legs and feet are extensive areas of anesthesia. Lepra bacilli were found in an excised nodule from the forehead.

*Presented to the Section on Cutaneous Medicine and Surgery, at the Fiftieth Annual Meeting of the American Medical Association, held at Columbus, Ohio, June 6-9, 1899.

On January 17, the treatment with antivenomous serum was instituted, the serum being graciously furnished by the Pasteur Institute of Lille, France; 1 c.c. was injected into the buttock, and the only reaction was a slight chill which occurred in the evening. On January 19, 1 c.c. was again injected, and on the 21st, 2 c.c. followed by slight chills several hours later. On the 23d, 3 c.c. injected gave no elevation of temperature nor other reaction. January 26, 4 c.c. was injected, and severe chills occurred during the evening. Two days later the temperature rose to 101.8 F., accompanied by loss of appetite and malaise, and there appeared over the lumbar vertebræ a boggy swelling which was distinctly painful and tender. The temperature and swelling both subsided in the course of a few days, and treatment was resumed.



February 2, 4 c.c. was injected into the right, and February 5, 4.5 c.c. into the left buttock. The latter injection was given at noon, and at 8 p. m. there was a slight chill followed by a rise of temperature to 100.8 F. On the 7th, 5 c.c. was injected into the right buttock at noon, and at 8 p. m. chills occurred, followed by rise of temperature to 101.6 F., and accompanied by anorexia and considerable depression, which lasted several days. At noon of February 9, the pulse was 128 and the temperature 100.6 F. On February 12, the quantity of the injection, owing to the depressing reaction, was reduced to 2.5 c.c. Several hours later there was elevation of temperature and great depression, and on the 14th the temperature rose to 104.2 F. In addition there were headache, complete anorexia, depression and intense restlessness. On February 16, the temperature was 103.4 F., with no abatement of the general symptoms.

At this time the suspicion arose that the fever might

be due to some oncoming disease, and, owing to the great prevalence of typhoid fever in the city, and its development in a few cases at the hospital, this affection was suspected. At this period the patient presented the following symptoms: The countenance was dull and the general expression indicative of profound prostration; the tongue was tremulous, dry and coated, with reddened edges. The pulse was moderately frequent and distinctly dicrotic. The abdomen was slightly full; some gurgling could be heard over the right iliac fossa; there was no tenderness and the bowels were constipated. Two indefinite but suspicious spots were present on the abdomen and loin. The patient had had nose-bleed, but this could easily have resulted from the nasal ulceration from which he was suffering. Indeed, on inquiry, he stated that he had been subject to nose-bleed. The spleen was apparently enlarged. Several days later, on the ninth day of the disease, there occurred numerous rose-colored spots over the abdomen and back, followed two days later by a profuse crop of typical typhoid efflorescences. The bowels remained rather costive throughout the course of the disease. The temperature for the first fortnight fluctuated between 102 and 104 degrees, gradually subsiding to normal on the twenty-third day. The pulse varied from 80 to 100. The Widal reaction, tested on the tenth day, was positive.

The development of the typhoid fever immediately after the use of the antivenomous serum must be regarded as a purely accidental, though interesting, circumstance. The injections were given with an antitoxin syringe, which was boiled each time before use. Antiseptic precautions in regard to the needle and the skin of the region injected were rigorously carried out. No inflammatory nodulation was ever manifest at the sites of puncture.

The patient convalesced rapidly and made an excellent recovery. The original disease remained entirely unaffected. The nine serum injections did not in the least influence the leprous manifestations. Whilst the result obtained is no fair criterion of what might have been accomplished if the treatment had been continued, yet the writer is constrained to believe that no better result would have been achieved. Dyer obtained visible amelioration after the first few injections, and by the ninth, marked improvement had already taken place.

The patient, disaffected by the restraint of liberty incident to confinement in an infectious hospital, made his escape from the institution. This precluded all possibility of a further trial of the remedy.

DISCUSSION.

DR. J. F. SCHAMBERG, Philadelphia.—I may add that antivenomous serum is made by injecting the virus, presumably of the cobra, into horses, the serum of the animal being subsequently withdrawn. The reason that this remedy has been employed in leprosy is not purely an accidental one. Dr. Dyer quotes the belief of the lay people of countries where leprosy is endemic, that leprous patients who are bitten by snakes are apt to recover. In fact, a Brazilian voluntarily submitted to the bite of a rattlesnake in order that he might be cured of the leprosy from which he was suffering; the bite proved fatal. As far as I am able to learn from the literature of the subject the present case is the first one reported in which typhoid fever has occurred in a leper.

DR. R. R. CAMPBELL, Chicago.—I would like to ask Dr. Schamberg whether he made the Widal test after diagnosis had been made; whether the serum treatment had any effect on the typhoid, and whether it was continued after the diagnosis of typhoid had been made?

DR. DOUGLASS W. MONTGOMERY, San Francisco, Cal.—I have never seen a leper with typhoid fever, and do not remember to have ever read the report of a case, and therefore do not know how the disease would react on one another. Of the general fevers, smallpox is said to have an especially bad effect on tubercular leprosy. A short time ago, however, a young girl suffering from tubercular leprosy and residing in the San Francisco pest-house was attacked with smallpox with no immediate bad effects as far as the leprosy was concerned. As regards the diagnosis, although the case reported seems undoubtedly one of tubercular leprosy, yet I did not note any mention of the demonstration of lepra bacilli. These bacilli are usually present in great numbers and are easily demonstrable in tubercular leprosy.

DR. J. F. SCHAMBERG—I will answer the queries of Dr. Campbell. The Widal reaction was made on the ninth day of the disease and was positive. The use of the serum was not continued after the suspicion of typhoid fever arose. Lepra bacilli were found in a nodule excised from the forehead, and in the accompanying photograph you will see the scar which remains from the excision.

Therapeutics.

Uses of the Stomach-Tube.

The increasing popularity of the stomach-tube is such at the present time that it is no longer the property of the specialist, but it is used throughout the medical world. Its indiscriminate use is irrational, and it is contraindicated in: 1. Heart disease, especially where there is defective compensation. 2. Myocarditis. 3. Angina pectoris. 4. Fatty heart, especially the advanced stages. 5. Aneurysm. 6. Recent hemorrhages, such as pulmonary, gastric, vesical, apoplectic, renal, rectal hemorrhage, etc. 7. Pulmonary tuberculosis. 8. Cerebral hyperemia. 9. Advanced cachexia. 10. In the continuous fevers, typhoid, remittent, etc. 11. Where there has been a recent hematemesis. 12. Ulcer of stomach. 13. Carcinoma of the pylorus, especially where there has been vomiting of "coffee grounds." 14. In all cases where there is a tendency for the gastric mucosa to bleed easily. 15. In those cases where the gastric affection is secondary to some more important primary disease.

The method of using an ordinary stomach-tube is very simple. The first and most important procedure is to secure the confidence of the patient; explain carefully the whole operation. Avoid the use of oils or greasy lubricants. Seat the patient in a straight-backed chair, having him lean his head slightly forward—most patients throw their heads backward. Wet the tube with warm water, place it back on the tongue, and tell him to swallow; the tube will readily enter the esophagus, when it can be rapidly passed into the stomach. Time may be saved with patients with tender fauces, especially those who smoke a great deal, by spraying the throat with a mild solution of cocain, 2 to 4 per cent., but this procedure will seldom be needed. After the tube has entered the stomach, avoid moving the tube, as this brings on nausea and vomiting. Have the patient breathe deep and regularly and attract his attention to something else by conversation.

Simple lavage with plain water, continued until it comes away clear, is preferable to the use of solutions. Medicamentation is better effected by the spraying apparatus of Einhorn.

—H. H. Roberts: *Am. Pract. and News.*

Infusion of Salt Solution with Inhalations of Oxygen in Pneumonia.

Noticing that salt solution often acted as a powerful respiratory stimulant in surgical cases, C. A. Penrose *(Johns Hopkins Hosp. Bull.)* was led to try it in three extreme cases of pneumonia. 1000 to 2000 c.c. normal salt solution (0.6 per cent.) were injected at a time. Whenever the pulmonic second heart sound becomes "murmurish" it is an indication that enough fluid has been injected. Regarding the use of the salt solution, the author draws the following conclusions:

1. It dilutes the toxins in the blood and promotes their elimination through the sweat glands and kidneys.

2. It relieves the delirium, lowers the temperature, stimulates the heart, lowers the respiratory rate and makes breathing easier.

3. It renders the patient more susceptible to the influence of oxygen.

The inhalations of oxygen are given at intervals, whenever lips or finger-tips become bluish, and are continued until the color becomes normal, usually 10 to 15 minutes. He advises passing oxygen through a wash-bottle containing a pint of hot water to which has been added:

℞ Tinct. benzoin co. ..... gtt. xl
Ol. terebinthinæ
Creosoti, āā ..... m. x

The gas is administered through an ordinary glass funnel held about two inches from the face.

Treatment of Whooping-Cough.

There seems scarcely room for doubt that whooping-cough is an infectious disease, but, although several micro-organisms have been described by different investigators as the exciting agents, there is no agreement as to any one of these being the specific cause. When this shall have been discovered we may reasonably next hope for the discovery of the antitoxin, inasmuch as the disease is a self-limited one and a single attack is usually protective against subsequent infection; so that it must be conceived that antitoxins are naturally generated in the process of recovery. In the absence, however, of a specific or antidotal therapy, we are still restricted to symptomatic or physiologic remedies. So far as one can judge, empirically or clinically, the best of these are the sedatives, the bromids and bromoform, including also antipyrin, although inhalations and belladonna and quinin, also are sometimes helpful. One of the most recent candidates for favor in the treatment of whooping-cough is an organic combination of fluorin, known commercially as antitussin, and a report of the results from its employment in 16 cases is given by Helm in a recent number of the *Berliner Klinische Wochenschrift* (No. 50, Dec. 11, 1899, p. 1102). The preparation used consists in an ointment made of 5 parts of difluordiphenyl, 10 parts of vaselin, and 85 parts of chemically pure wool-fat. This is readily absorbed when rubbed into the skin, preferably of the neck, chest and back, after these parts have been washed with warm soapsuds and dried thoroughly, with vigorous friction. A mass the size of a walnut is used, being evenly distributed, and vigorously rubbed in until it has all disappeared. Of the 16 cases treated, 7 were in the catarrhal, and 9 in the convulsive stage. In the former the course of the disease was virtually aborted, and in the latter the symptoms were greatly ameliorated. The remedy appeared to exert a pronounced antispasmodic effect, preventing the paroxysms of cough, the dyspnea, the cyanosis, and the threatened suffocation. Not only the severity of the attacks, but their frequency, also, was diminished, and the duration of the disease was distinctly lessened. In the next place the remedy proved an active expectorant. Finally, in the amounts used, it was entirely non-toxic. The preparation proved useful, further, in the treatment of catarrhal disorders of the larynx, trachea and bronchi.

Bromoform in Whooping-Cough.

Feer gives the parent 10 gm. of bromoform in a colored bottle with the directions to give the child three times a day as many drops as he is years old, plus two. Five years old=5+2, that is, seven drops three times a day for four days, and then four times a day. If no improvement is noted in a week add one drop, and by the end of another week add another drop. Older children should not take over 50 drops during the day, and adults not over 70 drops to 80. It should be taken after meals in water, milk or the yolk of an egg, from a spoon. Parents should be warned not to leave the bottle in reach of the children. Feer has observed a case (*Semaine Med.*, Dec. 13, 1899), in which a child 3 years of age took 4 gm. at once (120 drops), but the coma and cyanosis induced by the intoxication soon passed away, showing the slight toxic properties of the bromoform.

Milk from Dethyroidized Goats in Basedow's Disease.

Injections of blood serum from dogs deprived of their thyroid glands have been used in the treatment of Basedow's disease, on the assumption that this affection is due to thyroid hypersecretion which might be neutralized by the toxic substances accumulating in dethyroidized animals. O. Lanz reports very favorable results from ingestion of all the milk secreted by goats whose thyroid glands had been removed, half a pint to a pint a day. The pulse was retarded, the goiter, tremor and cephalalgia were diminished, while sleep and appetite were improved by the end of a few weeks in the two cases thus treated. Another patient has been taking the milk for only eight days, but the exophthalmia and cephalalgia are already improved.

Welander's Mercurial Treatment for Syphilitic Infants.

Seibert stated, before the German Congress of Physicians and Naturalists, that he had tested the pillow-slip method of treatment on twenty-one infants, and he warmly recommends it as simple, reliable when a mild treatment is required, no demands on the attendants and no danger from careless handling of powerful drugs, while in the case of infants the warmth in bed promotes the evaporation of the mercury. Children also have a larger surface, in proportion, than adults, to benefit by the evaporation. Seibert modifies Welander's directions by having the pharmacist rub Hg. cum creta, 40 to 60, on the fleecy side of the cloth, which is then folded once and the mother instructed to sew up the three open sides. The bag is changed every four to six days.

Causes and Treatment of Pernicious Anemia.

Grawitz, in the *Rev. de Therap.*, says that one of the chief difficulties in the way of the successful treatment of pernicious anemia is the improper nourishment of the patient on account of his anorexia. It is necessary to wash out the stomach and bowel and to give saline laxatives to correct this.

If the urine contains an increased amount of indican it is a sign that the intestines contain putrefactive material, and internal antiseptics, such as calomel and salol, should be given. To correct the hyperacidity of the stomach, bitters should be prescribed, or the wine of condurango, wine of pepsin or porter. It is indispensable that the physician have an oversight of the fluids taken by the patient. Iron is useless. Arsenic is the only drug which has a direct beneficial action. Massage, exercise, and appropriate gymnastics may be of some benefit. Infusion is only indicated in women who have lost a great deal of blood in induced labor.

Ulcerative Stomatitis.

Kissel advises, in the *Progrès Médical*, to rinse the child's mouth every hour with a 3 per cent. boric acid solution and rub twice daily the entire buccal cavity, and particularly the gums and ulcerated parts of the mucous lining of the cheeks, with a plug of cotton wet with the same solution. Cod-liver oil is prescribed, and before commencing treatment, unsound teeth should be extracted. Under this treatment ulcerations are said to disappear in from six to ten days. In private practice, when such minute attention is not possible, the author, after extracting the teeth, as before, curettes the ulcerations to the bottom, then with a finger enveloped in gauze he rubs iodoform powder into the ulcerated surfaces. The buccal cavity is cleansed twice daily with a tampon of cotton wet with boric acid solution, and the mouth is rinsed hourly with the same solution.

Use and Abuse of Internal Remedies in Treatment of Cutaneous Diseases.

A. Kuhner claims that the dermatologists neglect internal medication while the practitioner abuses it and depreciates the value of local treatment. He calls attention to the efficacy of arsenic (*Aerztl. Rundschau*, 1899) in lichen ruber, psoriasis and other dry desquamating affections; antimony for acute cutaneous diseases, especially in the form of vinum stibium, which has a favorable influence on the arterial pressure. Phosphorus is effective in nervous cutaneous affections (pemphigus, eczema neurot., etc.), and potassium iodid in large doses has been found extremely beneficial in psoriasis by Haslund.

Strontium Bromid in Epilepsy.

Laborde stated, at the meeting of the Paris Acad. de Méd., December 5, that strontium bromid resembles potassium and sodium bromid in its action, but is much more powerful, while no symptoms of intoxication follow its use such as are observed with potassium bromid. Four grams can be given from the start, and the dose of eight to ten grams a day progressively reached without inconvenience. He has an experience of several cases of epilepsy completely arrested for years by the use of strontium bromid.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Boston Medical and Surgical Journal, January 4.

1.—*What Position Shall Universities Take with Regard to Investigation? Thomas Dwight.
2.—*Epistaxis. Frederick C. Cobb.
3.—*Appendicitis in a Hernial Sac. Benjamin Tenney.
4.—*Nitrate of Silver in Hydrochlorhydria. M. P. Smithwick.
5.—*Simple Method for the Quantitative Analysis of the Gastric Contents for Use in Clinical Work. Henry F. Hewes.
6.— Three Unusual Cases of Angioneurotic Edema in Infancy. John Lovett Morse.

New York Medical Journal, January 6.

7.—*Injuries of the Kidney and Traumatic (Parenchymatous) Nephritis with Clinical Report of an Illustrative Case Accompanied by Hematoidinuria and Albumosuria, Terminating in Complete Recovery. Thomas J. Yarrow.
8.—*On a Grave Possible Error in Skiagraphy. Carl Beck.
9.—*Monstrum per Defectum. Alfred Moore.
10.— Report of a Few Cases of Chronic Empyema of the Antrum of Highmore; Operation by the Caldwell-Luc Method. A. W. DeRoaldes.
11.—*Therapeutic Application of Carbonic Acid Gas. A. Rose.
12.—*Sudan III Stain for the Tubercle Bacillus. D. Murray Cowie.
13.—*Limitations and Value of Fluoroscopic Examinations. Charles Lester Leonard.
14.—*Hemorrhoids: The General Practitioner and Ubiquitous Charlatan. A Plea for the Systematic Examination of Rectal Patients by the Family Physician. J. William J. Doyle.

Philadelphia Medical Journal, January 6.

15.—*Foreign Body, Chisel, Imbedded in the Nasopharynx and Posterior Pharyngeal Wall. Gary B. Gamble, Jr., and L. M. Tiffany.
16.—*X-Ray Examinations in Diseases of the Chest. Francis H. Williams.
17.— 1. A Bullet in the Popliteal Space. 2. A Case of Dilated Esophagus. Two Cases Showing the Value of the X-Rays and at the Same Time That in the First Case They Were Misleading. W. W. Keen.
18.—*The Skiameter. A. W. Crane.
19.— X-Ray in Military Surgery. N. Senn.
20.—*X-Ray Demonstration of Some of the Effects of Shoes and Stockings on the Human Foot. H. Augustus Wilson.
21.—*Practical Points in Use of X-Rays. Louis A. Weigel.
22.— Practical Use of Radiograph and Fluoroscope in Diseases of the Lungs. T. Mellor Tyson and William S. Newcomet.
23.—*X-Ray Diagnosis of Nephrolithiasis—A Résumé of Its Development and Value. Charles Lester Leonard.
24.—*White Gangrene. George G. Hopkins.
25.—*X-Ray as a Diagnostic Agent in Pulmonary Diseases. J. Edward Stubbert.
26.— Technique of X-Ray Work. Arthur W. Goodspeed.
27.—*Treatment of Lupus by X-Rays. Philip Mills Jones.
28.— Two Cases of Simultaneous Fracture of Patellas, Treated by Wiring the Fragments. J. S. Wight.
29.— X-Rays in Study of Heart Reflex. Albert Abrams.
30.—*Use of X-Ray in Orthopedic Surgery. Robert W. Lovett.

Medical News (N. Y.), January 6.

31.—*Principles of Treatment of Fractures by Systematic Movements and Massage without Apparatus for Immobilization. Lucas Championniere.
32.—*Some of the Causes of Failure to Relieve Asthenopia and Allied Symptoms. F. W. Marlow.
33.—*Aseptic Catheterism. Carl Beck.
34.— Series of Cases of Pistol Shot Wounds in the Head. Charles Phelps.
35.— Case of Polydactylism. A. L. Benedict.

Medical Record (N. Y.), January 6.

36.—*The Diet in Typhoid Fever. Morris Manges.
37.—*Two Cases of Tumor Pressing on the Cauda Equina; Removal; Recovery. B. Sachs.
38.—*Puerperal Insanity. William Hirsch.

Medical Review (St. Louis, Mo.), January 6.

39.—*Relation of Mental Disease and Residence in an Asylum or Sanitarium to Life Expectancy. Harold N Moyer.
40.— Case of Impetigo Contagiosa Bullosa Simulating Pemphigus Vulgaris. Albert Fuller.
41.— Amputation Stump. H. D. Fairbrother.

Cincinnati Lancet-Clinic, January 6.

42.—*The Tonsillar Ring. Derrick T. Vail.

North Carolina Medical Journal (Charlotte), Dec. 20, 1899.

43.— Croupous Pneumonia in Children. J. Howell Way.
44.— Acute Tonsillitis. Edwin Gladmon.
45.— Acute Pneumonia in Children. W. L. Harris.

Northwestern Lancet (St. Paul, Minn.), Dec. 15, 1899.

46.— Extra-Uterine Pregnancy. John T. Rogers.
47.— Obstetric Emergencies. W. S. Fullerton.
48.— Croupous Pneumonia. A. A. Finch.
49.— Obstruction of a Deviated Rectum due to the Encroachment of the Right Utero-Sacral Ligament. John H. Rishmiller.

Columbus Medical Journal, Dec. 5, 1899.

50.—*Report of a Case of Pseudo-Diphtheria. Frank L. Stillman.
51.—*Intestinal Obstruction, Operation and Recovery, with Report of Cases. Sherman Leach.

American Practitioner and News (Louisville, Ky.), Dec. 1, 1899.

52.— The Doctor's Pay. John G. Cecil.
53.—*Methylene Blue as a Local Application in Diseases of the Mucous Membrane: with Report of Three Cases. Charles Moir.

Clinical Review (Chicago), January.

54.— Acute and Chronic Myelitis. Henry M. Lyman.
55.— Clinical Lectures on Etiology, Pathology, Diagnosis and Treatment of Tumors. A. H. Levings.
56.— Notes on the Liver and Its Diseases. George Dock.
57.— Dermoid Cyst of Ovary Complicating Labor. Henry F. Lewis.
58.— Lecture on Gunshot Wounds. Chas. B. Nancrede.
59.— Clinical Lectures on Obstetrics and Gynecology: Albuminuria and Eclampsia. Denslow Lewis.

Medical Standard (Chicago), January.

60.—*Pulmonary Anemia: An Early Symptom of Phthisis. Albert Abrams.
61.— Urethral Bougies, Catheters and Sounds. A. P. Heineck.
62.— Chronic Nasal Discharge. Paul I. Dombrowski.
63.— Preparations of Iron in Therapeutics. Anton Ewald.
64.— Intestinal Antiseptics. J. F. Purviance.

Louisville Monthly Journal of Medicine and Surgery, January.

65.—*Study of Sixty-one Cases of Appendicitis, Thirty of Whom Were Operated On. Frank T. Meriwether.
66.—*Arm Saved After Being Run Over and Crushed by a Locomotive. S. L. Kilmer.
67.—*Some Phases of Malaria: Quinin In. William Britt Burns.
68.— The Young Physician's Reception. Wilbur F. Sterman.
69.— Aneurysm: With Report of Case. J. Brent Palmer.
70.— Leucoma Adherens, a Sequel to Gonorrheal Ophthalmia, Followed by Two Acute Attacks of Glaucoma. Adolph O. Pfingst.

Medical Review of Reviews (N. Y.), Dec. 25, 1899.

71.—*Cholangiostomie: Two Cases Recovering. B. Merrill Ricketts.

Medical Herald (St. Joseph, Mo.), December, 1899.

72.— Diabetes and its Constitutional Treatment. Elmore S. Pettyjohn.
73.— Human and Bovine Tuberculosis and its Relation to State Medicine. R. E. Graham.
74.— Symptoms and Diagnosis of Carcinoma Uteri. H. J. Boldt.
75.— Blood and Quinin in Malaria. L. H. Warner.
76.— Pernicious Intermittent Fever Treated with Hypo-Quindol (Gardner). C. O. Buck.
77.— Clinical Experience with Thialion. L. Lofton.
78.— Surgical Suggestions. W. J. Bell.

Canadian Journal of Medicine and Surgery (Toronto), January.

79.— History of Medicine. Ezra H. B. Stafford.
80.— Treatment of Acute Digestive Disorders of Infancy. Andrew R. Gordon.
81.— Anesthesia by Chloroform and Ether. William B. Jones.
82.—*Cases of Puerperal Sepsis Treated with Antistreptococcic Serum, with Notes. George T. McKeough.
83.—*Hospital Room in Each Dwelling. W. J. Telfer.

Dominion Medical Monthly (Toronto), December, 1899.

84.— Therapeutics of Conversion, or the Vis Medicatrix Spiritus Sancti as a Cure for Erotic Neurasthenia, with a Remarkable Case.
85.—*Distribution of Anthrax in Ontario. W. T. Connell.

Southern California Practitioner (Los Angeles), December, 1899.

86.— Plea for Early Radical Treatment of Appendicitis. O. O. Witherbee.
87.— Some Causes of Failure in Prescribing Digitalin: Dosage. W. T. Bolton.
88.— Case of Ptomain Poisoning. W. M. Lewis.
89.— Parrott's Disease, Report of a Case. C. G. Stivers.

Brooklyn Medical Journal, January.

90.—*Achylia Gastrica with Report of Two Cases. H. W. Lincoln.
91.—*Salpingitis. Frederick J. Scoop.
92.—*Remarks on Gangrene of Lower Extremities: With a Plea for Early Operative Procedure. William Maddren.

New Orleans Medical and Surgical Journal, January.

93.— Review of the Bacteriology of Gonorrhea. O. L. Pothier.
94.— Report of Cases of Spinal Injury Treated at the Charity Hospital, New Orleans, During 1899. E. D. Fenner.
95.— Report of a Case of Bradycardia. T. S. Dabney.
96.— Interesting Case of Stenosis of the Trachea. Good Results from an Operation for Exophthalmic Goiter. W. W. Keen.
97.— Treatment of Cases of Psychic Impotence. Orville Horwitz.

Obstetrics (N. Y.), December, 1899.

98.—*Atresia Vaginæ Complicating Labor. George G. Ward, Jr.
99.—*Ovarian Cyst Complicating Labor. H. D. Peterson.
100.— Report of Case of Dermoid Cyst of Ovary Complicating Labor. Henry F. Lewis.
101.— Dystocia Due to the Fetus. Thomas S. Bullock.
102.— Physical Diagnosis in Obstetrics. (*Continued.*) E. A. Ayers.

Toledo Medical and Surgical Reporter, January.

103.— Psoriasis. J. C. Reinhart.
104.— Locomotor Ataxia. W. W. Brand.
105.— Locomotor Ataxia. C. W. Newton.
106.— Pathologic Anatomy of Locomotor Ataxia. J. H. Jacobson.
107.— Pulmonary Tuberculosis Treated with Hypodermic Injections of Bromin-Iodin Compound, with Clinical Reports. Paul Plummer.

St. Louis Medical and Surgical Journal, January.

108.— Quosque Tandem, Catalina, Abuteris Patientia Nostra? Albert S. Ashmead.
109.— Contribution to Therapeutics of Pepto-Mangan, "Gude." Ludwig Paul.

Journal of Cutaneous and Genito-Urinary Diseases, (N. Y.), January.

110.—*Case of Blastomycetic Dermatitis Engrafted on Syphilitic Ulcers. Henry G. Anthony and Maximillian Herzog.

111.—*Case of Macular Lepride of Scalp, with Remarks on Localization of Leprous Lesions. Prince A. Morrow.
112.—*Etiology and Rational Treatment of Urethral Arthritis and Allied Affections. A. MacKenzie Forbes.
113.— Urethroscope in Treatment of Strictures. Henry Koch.
114.— Unusual Complication of Subacute Gonorrhea. J. Henry Dowd.

Colorado Medical Journal (Denver), December, 1899.

115.— Report of Case of Intubation of Larynx in an Adult. F. E. Waxham.
116.—*Two Complicated Cases of Appendicitis. S. D. Van Meter.
117.— Dental Jurisprudence. F. F. Graves.
118.—*Report of Case of Hydrophobia. Edwin R. Axtell.
119.— Genito-Urinary Memoranda. Wm. P. Munn.

Archives of Ophthalmology (N. Y.), November, 1899.

120.—*Spontaneous and Post-Operative Detachment of Retina in Myopic Eyes. Conrad Fröhlich.
121.—*Case of Papillo-Retinitis Due to Chlorosis. W. Schmidt.
122.— Contributions to Embryology of Lens. C. Ritter.
123.— Binocular Vision after Extraction of Senile Cataract of One Eye. Edgar S. Thomson.
124.—*Buphthalmus with Lenticonus Posterior. Ed. Pergens.

Richmond Journal of Practice, December, 1899.

125.— Practical Experience in Asepsis and Antisepsis in Obstetrics. Douglas Ayres.

Merck's Archives (N. Y.), December, 1899.

126.— Use of Remedies in Asthma. J. H. Jackson.
127.— Aspidosperma Quebracho in Therapeutics. Virginius W. Gayle.
128.— Diagnosis and Treatment of Uremia. Augustus A. Eshner.
129.— Gaduol in Chronic Bronchopulmonary Catarrh. Joseph M. Patton.

Medical and Surgical Monitor (Indianapolis, Ind.), Dec. 15, 1899.

130.—*Care of the Recent Case of Insanity. C. B. Burr.
131.— Notes of European Travel. A. J. Banker.

AMERICAN.

1. **Universities and Original Investigation.**—Dwight believes it is not the duty of universities to urge, much less to force, original investigation on students. It should be on hand for those whose zeal is so great that it will take no denial. He would not give more prizes, but of scholarships for deserving men we can hardly have too many. As to the encouragement and support of investigation in its faculty, it is the primary object of the professor to teach, but there are cases where it is necessary for his reputation and influence, to do some original work, and the university should assist, especially in the financial needs of this. The best plan would be to place a sum in the hands of the professor at the head of each scientific department, to be spent for the good of that department, including publications. If the individual lacks discretion in the use of this fund, a check to the system would naturally follow.

2. **Epistaxis.**—The causes of bleeding, according to Cobb, may be either local or general. The local causes are more apt to be ulcerations of the blood-vessels, resulting from scabs and crusts on the septum. These may be caused by irritation, as in deflected septum, by foreign bodies—although this is rare—by new growths, and especially by operations for sarcomata. The general causes are plethora and anemia, the hemorrhagic diathesis, acute febrile diseases, vicarious menstruation and disease of the kidneys, syphilis, phthisis and alcohol. It seems to the author that the occurrence of severe bleeding should lead to an examination of the kidneys as a cause. As regards treatment, he recommends cauterization of the bleeding point on the septum with chromic acid, or galvanocautery after cocainization, suprarenal extract to be tried, watching for a possible renewal of the hemorrhage from vascular reaction. Plugging, when resorted to, should be done by strips of gauze introduced along the floor of the nose by means of long forceps, the Eustachian prominence not to be occluded. Packing should be left in twenty-four to forty-eight hours, and removed with the utmost care.

3. **Appendicitis in a Hernial Sac.**—Tenney reports a case of appendicitis due to hernia of the inflamed appendix, which was removed. He discusses the condition generally, which is unusual, though hardly to be called rare.

4. **Nitrate of Silver in Hyperchlorhydria.**—Smithwick reports three cases of treatment of hyperchlorhydria with nitrate of silver, ¼ gr. in ½ ounce of water, poured through a stomach-tube after lavage. While his experience is limited, he thinks it worthy of a thorough trial. We should remember the possibility of argyria and occasionally omit it.

5. **Quantitative Analysis of Gastric Contents.**—Hewes publishes a new method of quantitative analysis, which he claims is more simple than the one he published some two years ago.

1. *Total free HCl.*—For this measure off 5 c.c. of contents after shaking, and add Töpfer's reagent. If free hydrochloric acid is present, the mixture will assume a carmine red color. This will occur, as a rule, with one drop, though three or four may be required. To this add a decinormal solution of sodic hydrate by titration, until the red color changes to orange or bright yellow. The number of cubic centimeters of the soda solution required are read off and multiplied by .00365 grains. The amount of free hydrochloric acid in the 5 c.c. of contents is thus obtained and the percentage may be reckoned. In order to make this test more exact, he supplements it with a tropeolin test, adding a drop of a saturated solution of 00 tropeolin to a drop of the mixture in a warm dish. As long as such a mixture gives a purple color on evaporation, the free HCl is not yet neutralized.

2. *Total free acids plus free acid salts.*—To the same 5 c.c of contents already used, continue to add the decinormal soda solution until a drop of the mixture fails to color Congo red paper, and by taking a record of the soda used up to this point, the quantitative estimate of the total free acids plus acid salts in the contents can be obtained in the same manner as the estimation of the total free HCl. If in performing this Congo test the reaction point is passed, the paper is turned a brighter red than its original color. It is easy, therefore, to control the accuracy of the test.

3. *Total acidity.*—Using the same 5 c.c. mixture, 2 drops of a 1 per cent alcoholic solution of phenolphthalein is added. Continue to add the soda solution until a deep red color of a maximum intensity is obtained. This indicates the presence of an alkaline reaction or the neutralization of all the acid elements. From the record of the soda solution used to accomplish this result we estimate the total acidity. Care must be taken to develop the deepest red color which can be obtained. This analysis gives us a qualitative test for free hydrochloric acid, and a quantitative estimation of the total free hydrochloric acid, the total free acids plus acid salts, and the total acidity. By subtracting the total free HCl from the total free acids plus salts, we obtain a quantitative estimate of the total organic acids plus acid salts. By subtracting the total free acid salts from the total acidity, we obtain the total combined acids—the total combined HCl in cases where free HCl is present. By adding this total combined HCl to the total free HCl we obtain the secreted hydrochloric acid. In cases in which free hydrochloric acid is present to the Töpfer test, this test includes, with the exception of the qualitative test for lactic acid, all the tests that are necessary in ordinary clinical work. Where the Töpfer test is absent or doubtful, the qualitative test for free HCl must be tried with 00 tropeolin. Boas' resorcin reagent and phloroglucin vanillin. Where a trace is discovered by one of these tests which could not be determined by the Töpfer test, the amount present is recorded as a trace, it being too small to admit of a definite quantitative determination. When no free hydrochloric acid is present by any qualitative test, the contents are first tested by Congo red paper. A positive test shows the presence of free acids—organic acids—or of acid salts of both. Five c.c. of contents is then estimated with the soda solution, against Congo red and phenolphthalein in turn, and the free acid plus acid salts and the total acidity determined. If no free acid plus acid salts is present, the contents is first tested with blue litmus. If the test is positive, the presence of combined acids of some kind, either mineral or organic, is proven. Five c.c. of the contents is then estimated against phenolphthalein, to determine the total acidity. In cases in which no free HCl is present, and the contents is still acid, it is of much importance to determine whether or not the combined acid present or a part of it is combined hydrochloric acid, for by this determination we ascertain whether or not any hydrochloric acid is secreted; that is, whether the acid-secreting cells of the stomach suffer from a total loss of function or a simple diminution of this function below normal. This fact may be ascertained in a simple manner by subjecting the contents to the qualitative test for chlorin, except that present in the form of inorganic chlorids, known as the Ewald-Sjoqvist test.

Test for combined hydrochloric acid in the absence of free hydrochloric acid.—Ten c.c. of the contents is mixed with a pinch—half a saltspoonful—of barium carbonate. This mix-

ture is evaporated and the residue fused to a red heat in a platinum crucible—fused to a red heat only. The fused mixture is treated with boiling water. The mixture is filtered. The filtrate and wash-water together should amount to about 30 c.c. To this filtrate cooled, from 5 to 10 c.c. of a saturated solution of sodium carbonate is added. If chlorin in the form of organic chlorin compounds—acid albumins, peptones—is present in the original mixture, a white precipitate will form in this filtrate. When this barium carbonate test is positive, then we know that some of our combined acid is combined hydrochloric acid, and that the disturbance of the secretion of acid present is due to a diminution rather than a total loss of function of the secreting cells. This is a fact of considerable importance in our knowledge of the case. This Ewald-Sjoqvist test is very simple. It occupies about half an hour. It necessitates for apparatus a platinum crucible and a Bunsen lamp. The necessary reagents are: 1, barium carbonate C.P.; 2, saturated aqueous solution of sodium carbonate. All methods of quantitative estimation of the total combined hydrochloric acid in the absence of free hydrochloric acid, which are of sufficient accuracy to be of use, are too difficult of application for use in ordinary clinical work. Hewes employed the above method as a routine practice in all cases of gastric affections in his outpatients, for two years, and he thinks the results have paid for the trouble.

7. **Injuries to the Kidneys.**—Yarrow reports a case in a child who was run over by a coal cart and had the symptoms of contusion or laceration of the kidney with acute nephritis, but in whom the symptoms followed a very favorable course, the recovery being complete in about forty days after the accident. One of the most interesting features of the case was the occurrrence of hematoidinuria, which continued until after the blood clot had been absorbed in the contused kidney. He thinks that in this condition the hemoglobin is changed to hematin and methemoglobin, and finally subjected to further oxidation by contact with the tissues, and converted into hematoidin. The acute traumatic nephritis in the case would probably have lasted less than a month except for an aggravation due to influenza at its close.

8. **Errors in Skiagraphy.**—Beck calls attention to the possibility of errors in accepting skiagraphs of a bone fracture, and illustrates by a case showing how the first view in the anteroposterior direction alone failed to reveal an oblique fracture of the tibia satisfactorily. The case shows the importance of taking at least two skiagraphs in different positions in all cases of suspected fracture.

9.—See abstract in THE JOURNAL of Dec. 2, 1899, p. 1419.

11. **Therapeutic Application of Carbonic Acid Gas.**—This article gives a general review of the effects of carbonic acid gas in pathologic conditions, with a history of its employment in this way. The author shows that it causes hyperemia of the nasal membranes, and that it has its value in rheumatism and neuralgia in balneologic treatment. His paper is to be continued.

12. **The Sudan III Stain.**—Cowie shows the unreliability of this stain, as now manufactured and sold, for the differentiation of the tubercle bacillus, and thinks that the original stain used by Dorset appears to be now unattainable. He hopes it will be found, and if it proves, as it appears it might, to be a selective stain for the tubercle bacillus, its value in clinical medicine will be beyond calculation.

13. **Limitations of the Fluoroscope.**—The value of the fluoroscope is that it aids and confirms the mental pictures obtained by the diagnostician by other methods, but it does not replace them. It is impossible to always determine the difference shown in this manner on normal tissues under different conditions, and unless we know the normal, it is impossible to determine the pathologic. This is especially true of the lungs, which vary in their showing according to their expansion and other circumstances. The apices, for instance, of persons of sedentary habits, expand imperfectly in normal breathing, and thus might lead to a diagnosis of incipient phthisis. Absolute accuracy by this method seems to be impossible. Its value is less than that of the skiagraph, which records its work, and instantaneous skiagrams, which may be made in future, will possibly afford one of the greatest advances in X-ray work.

14. **Hemorrhoids.**—Doyle calls attention to the carelessness of accepting a patient's testimony as to his rectal condition, and illustrates it by cases which he says might be multiplied indefinitely. There is really nothing difficult about making rectal examinations, though they are sometimes objected to. He gives his method in detail. After becoming satisfied as to the condition of the external parts, the vast majority of diseases within the rectum can be detected by the educated finger, the speculum being rarely required. When entering the finger will give a definite idea of the condition of the external sphincters, and once the finger is inside, we readily detect any abnormal condition, such as stricture, internal piles, polypi, old ulcers with indurated bases, and sometimes the opening of internal fistulæ. In males we learn the condition of the prostate gland, and in the female, the size, shape and position of the uterus, ovaries, etc. For ordinary examinations, where the speculum is required, Cook's or Matthew's instruments are satisfactory, while for the deeper parts, Kelly's tubes are admirable, but require more skill in their introduction. The soft silver probe is sometimes useful, but is really rarely required, as in demonstrating an internal fistula or opening. The rectal bougie is a dangerous instrument, even in the hands of an expert. In connection with the history inquire as to: 1, pain, its character, situation and relation to the act of defecation—whether worse before, during, immediately after, or some time after evacuation; 2, itching; 3, a sense of fulness, heat and burning; 4, swelling and protrusion at anal opening—its relation to defecation, whether or not it becomes reduced spontaneously; 5, bleeding; 6, discharge—if any, its nature, whether mucous, bloody, purulent, or offensive—its relation to defecation or its occurrence independently of that process; 7, the character of the evacuation as to color, size, consistence and regularity; 8, the family history regarding malignant disease and generally investigate the *personnel* of the patient. Such examination will place us in a position to form at least a fairly accurate diagnosis and enable us to keep the patient within the circle of an educated profession, and the rectal charlatan, whose sole object is to grasp the pursestrings of the sufferer, will be compelled to devote his attention to other pursuits.

15. See abstract in THE JOURNAL of Nov. 4, 1899, p. 1181.

16. **X-Ray Examinations in Thoracic Diseases.**—The paper of Williams is an elaborate one, going into details as to the relative advantages of the X-ray as compared with the other methods of diagnosis of heart and lung diseases, aneurysms, neoplasms, etc. He does not advocate giving up any other methods for making diagnosis in thoracic diseases—we need all the aids we can have—but strongly urges the addition to them of careful X-ray examinations, and emphasizes the value of this method as a means of indicating early certain abnormal conditions in the chest. We have two methods of examining the heart and lungs—auscultation and percussion. Each of these in suitable cases gives valuable information; they require a trained ear and experience with many patients to make them serviceable. In some cases the former is of the greater value, in others percussion; more frequently they are best when used together. To these we may now add a third method, which also requires special training, that of X-ray examinations. There are diseases in which each of the three methods may render the chief service, and each may in other cases be of little value. Usually, they should be used together; each supplements the other.

18. **The Skiameter.**—This instrument is described and its use indicated. It consists of a screen on which are fastened strips of tinfoil of from one to ten layers, with intervals between. These have also two holes of different sizes cut in them. The tinfoil bar of only one layer is the unit of shadow measure; if its shadow is undistinguishable, while that of the next is seen, we have a chest shadow of one degree. This explains its main utility, but it also serves for topographic mensuration.

20. **Foot Deformities.**—Wilson demonstrates by the X-rays the effects of foot coverings on the feet.

21. **Practical Points in X-Ray Work.**—Weigel prefers a static machine for the work, uses mechanical rests, objects to too close tubes, even with short exposures, thinks photographs preferable to the fluoroscope, and makes various suggestions as to developing, printing, etc. He believes more attention

should be given to this part of the work. The fluoroscope has only a limited usefulness, and is, he suggests, perhaps responsible for some of the charges of unreliability, etc. of X-ray revelations. His paper concludes with illustrative cases.

23. **X-Ray Diagnosis of Nephrolithiasis.**—The diagnosis of kidney calculi requires a "soft" Crookes' tube, or one with a low vacuum, and also one that is self-reguiating. The vacuum required is shown, by experience, to equal in resistance one or two inches of spark in air. The length of exposure depends on the individual and is also dependent on the amount of energy developed in the secondary circuit, since this influences the volume of the Roentgen discharge. High wattage and not high voltage is the necessary element in the current employed to energize a tube for differentiation in soft structures *en masse*. He gives reports of thirty-six cases.

24. **White Gangrene.**—According to Hopkins, the X-ray burn is due to destruction of the nerve-supply of the part by the rays. It is more common when alternating currents are used, and he has found but four cases on record when the static current was employed, and then only when the exposure has been unduly long. If improper apparatus, too long exposure and too close approach to the tube are avoided, and the static machine used, there need be no fear of injury.

25. **X-Ray in Lung Diseases.**—Stubbert reviews the methods of pulmonary examinations with the fluoroscope, and describes the appearances. A great deal depends on the intensity and steadiness of light and the amount of muscular and adipose tissue intervening between it and the fluoroscope.

27. **Cure of Lupus by X-Rays.**—Jones reports two cases of lupus of the face cured by the X-rays.

30. **X-Ray in Orthopedic Surgery.**—Lovett's paper illustrates the uses of the rays in orthopedic surgery. Twenty-nine skiagrams are given, showing their value in the diagnosis of existing conditions.

31. **Treatment of Fractures Without Immobilization.**—Lucas-Championnière advocates the treatment of fractures without the use of immobilization apparatus, and maintains that by this method at least one-fifth of all fractures can be treated. It consists in passive movements of the joints, and general massage of the limb, both of which prevent stiffening of articulations, muscles and tendons, and especially favor repair. The massage should never give pain, and should always be followed by an attempt at passive movement of the joints of the limb, which procedure must also be accomplished without pain. There is only one contraindication to this method, and that is a threatening deformity, and this only should prevent the surgeon from using this method. In 598 patients with serious lesions thus treated, 370 suffered from fractures which he gives in classified form. He thinks it gives more rapid and satisfactory results than any other plan of treatment employed at the present time. It requires, however, more attention and personal care than does the use of apparatus which may be left undisturbed for days or weeks.

32. **Asthenopia.**—The cases of asthenopia which fail to be relieved by the ophthalmologist are discussed by Marlow, who divides them into curable and incurable, and gives illustrations of each form. The curable cases may fail from the fault of the patient or that of the oculist, or there may be extreme latency of some of the errors of refraction and equilibrium that are overlooked or very difficult to correct. The incurable cases include congenital asthenopes whose eyes are incapable of a normal amount of work, independently of their refraction and muscular condition, and of the general health, and second, those in which the symptoms are due to organic disease of the brain or to some general disease.

33. **Aseptic Catheterism.**—The chief point in Beck's paper is the necessity of very thorough cleanliness, extreme delicacy and much patience in catheterization and he shows how difficult it is to make the urethra aseptic; even the normal passage contains numerous pathogenic germs. He advises a prophylactic injection of a 5 per cent. emulsion of iodoform in glycerin before the introduction of the instrument. In this case, if an abrasion is caused, the iodoform will come in contact with the wound at the very first, and destroy the germs or arrest their growth. The trusting of a catheter to the patient himself is unscientific and should be done only under the most pressing circumstances. Soft catheters should be chosen, and the fact that their usefulness is soon destroyed by repeated boiling should not have much weight in the matter.

36. **Diet in Typhoid.**—Manges pleads for a more liberal diet in typhoid, and points out that the dangers are decidedly less than they have been commonly supposed. Typhoid fever is a general toxemia, and it is this rather than any particular lesions to which we must direct our attention, and regulate the diet, and the general nutrition should be kept up at the highest point possible. The dangers of hemorrhage as far as the limited number of cases quoted permits judgment, is not increased, nor does he believe that the dangers of perforation are any greater with a soft than a liquid diet. Our present directions are too stereotyped, usually being that the patient should be fed on milk. Manges thinks that if proper disinfection of the stools, urine, etc., were attended to, and we studied the diagnosis of typhoid fever more instead of prescribing useless drugs, the benefit to the world would be very marked. He does not lay down the rule that every patient should be placed on this less restricted diet, nor that every article may be allowed, but simply pleads for a more liberal feeding, which he thinks the experience of competent observers has taught us is safe.

37. **Tumors Pressing on the Cauda Equina.**—Sachs reports two cases of tumors pressing on the cauda equina in the lower spinal canal, both of them operated on with success, and the chances of recovery greatly improved. It is possible that in one case at least there may be some malignant residua left, and that there is a serious danger of relapse. The localization of spinal growths is now so well fixed that the question is not where, but what is the lesion, and do the symptoms warrant the diagnosis of tumor and make operation advisable. Sachs believes that whenever there is a strong suspicion of extraspinal neoplasm, and a possibility of reaching the site, an exploratory operation should be made as early as possible. If properly done it is perfectly harmless.

38. **Puerperal Insanity.**—Hirsch ends his paper as follows: 1. A specific form of mental disease, which might be called puerperal insanity, does not exist. The different psychoses which are observed during one of the stages of gestation are the same as those we see in other patients. 2. Pregnancy may, under certain circumstances, be one of the etiologic factors of insanity. Its etiologic importance, however, is proven by neither statistics nor clinical observation. It is, therefore, not permissible to terminate pregnancy on account of a psychosis, unless there are special indications for such intervention. 3. During parturition we sometimes meet a transitory disturbance of consciousness, the clinical features of which resemble psychic epilepsy. 4. Psychoses which occur in connection with the act of parturition are produced: *a*, by trauma in cases of difficult labor; *b*, by anemia and exhaustion after severe hemorrhage; *c*, by intoxication in septic cases or local inflammation, or uremia. The clinical symptoms of this group of psychoses consist of an acute delirium, which either leads to recovery after a short time or passes into a secondary psychosis. All these cases may be produced by the same causes in the non-pregnant state. The clinical features have nothing special in any way. 5. Lactation, as such, plays no rôle in the production of insanity. It is due to other circumstances that, during the first few months after delivery, women, on the average, are more predisposed to nervous and mental diseases than under ordinary conditions.

39.—See abstract in THE JOURNAL of Dec. 30, 1899, p. 1655.

42.—Ibid., Dec. 2, 1899, p. 1423.

50. **Pseudo-Diphtheria.**—Stillman reports a case of apparent diphtheritic growth in which the most careful examination of the membrane was negative as regards the Klebs-Loeffler bacillus, and showed a pure streptococcic invasion. The duration of the disease was three weeks.

51. **Intestinal Obstruction.**—In regard to this subject, Leach says, after due trial with various remedies, calomel, oil, salines, also rectal enemata of various kinds, if we fail to get the bowels open, we should not delay operation. Peritonitis should be prevented by operation at once, without waiting for its symptoms. He reports cases illustrating his views.

53. **Methylene Blue.**—Moir reports three cases in which he used methylene blue as a local application to the mucous mem-

brane in purulent diseases of the tonsils and nasal passage, with the best results. In one of the cases he also employed it internally, in 2-grain doses three times a day. He believes its pus-destroying effects are equal to if not superior to those of any other drug.

60. **Pulmonary Anemia, an Early Symptom of Phthisis.**—Abrams, in a former communication, called attention to the presence over the thorax of apparently normal individuals of constant areas of diminished percussion resonance, varying from dulness to flatness. These vary in number and situation in the individual, but generally admit of definite localization. He has called these atelectatic zones. They can be dispelled by repeated forced inspiration, but will return with ordinary breathing, and in children more than in adults are associated with anemia. These zones bear an almost definite relation to the points of election and the paths of distribution of the lesions in chronic pulmonary tuberculosis. Since the advent of the Roentgen rays, he has confirmed these views, but finds that voluntary forced breathing alone is not always sufficient to dispel these areas, and he now subjects such patients to breathing exercises with compressed air, before submitting them to the skiascopic examination. The indications for treatment are to increase the power of the lungs and increase its development by proper gymnastics.

65.—This paper, here printed as original, has appeared elsewhere; see abstract in THE JOURNAL of Dec. 9, 1899, p. 1479, ¶ 24.

66.—Ibid., Oct. 28, 1899, p. 1090, ¶ 63.

67.—See abstract in THE JOURNAL of Oct. 21, 1899, p. 1042.

71.—Ibid., Nov. 11, 1899, p. 1229.

82. **Puerperal Sepsis Treated by Antistreptococcic Serum.**—McKeough reports a case of puerperal sepsis treated by the injection of 10 c.c. doses of antistreptococcic serum, and mentions others that have come to his knowledge similarly treated. While the evidence in regard to this method of treatment is conflicting, he is inclined to think that the good results in his case were due to it.

83. **Hospital Room in Dwellings.**—Telfer here recommends that in house construction a special room be taken for cases of sickness, not to be utilized for this alone, but to be so built and furnished that it can, in case of need, be made a proper hospital apartment and isolated and disinfected as such. The ceilings, walls, and floors should be finished so that they can be thoroughly washed, its furniture such as can be rendered aseptic. Special bath and closet arrangements should be provided, and a stairway that can be exclusively used. The advantages of such a room are pointed out.

85.—See abstract in THE JOURNAL of Dec. 9, 1899, p. 1505.

90. **Achylia Gastrica.**—Two cases are reported, with a general discussion of the subject. The condition is considered to be a disease, not a symptom, and while it may exist without any symptoms whatever, the patient being in apparent health, there are generally symptoms of dyspepsia, constipation, etc., and sometimes obstinate diarrhea with nausea and vomiting. The treatment consists in keeping up body nutrition and stimulating the gastric muscles. Five or six small meals are preferable to three ordinary ones, and milk given according to the views of L. D. Bulkley works admirably. For local stimulation, lavage and intragastric electrization stand pre-eminent. Either or both may be continued for a long time, according to the case. Many require no medicinal treatment. Dilute hydrochloric acid, some good iron preparation, fluid extract of condurango, tincture of nux vomica, Fowler's solution, etc., are used as indicated. Pineapple juice is a good substitute for hydrochloric acid.

91. **Salpingitis.**—Shoop thinks the majority of cases of salpingitis are due to a streptococcic invasion, the gonococcus not being so great a factor as was formerly supposed.

92. **Gangrene.**—The various forms of gangrene and their causes are mentioned by Maddren, who believes that it is the wisest and best procedure to have the patients submit to amputation at the most favorable point in the first stages of the malady, while their recuperative powers are at their best and their systems are less charged with toxic matter.

98. **Atresia Vaginae Complicating Labor.**—Ward summarizes his study of this subject in the following: 1. In the great majority of cases Nature is competent to overcome the obstructions by the softening and relaxing of the tissues incident to the later months of gestation, and by the dilatation produced by the presenting part. 2. No hard and fast rules can be laid down for such cases, as the treatment must depend on the character of the obstruction. 3. Labor is very apt to be induced by efforts at dilatation, and unless premature delivery is intended, such efforts had better be deferred until near term, or until labor sets in, especially as the condition of the tissues is more favorable for dilatation at that time. 4. Hydrostatic and careful manual dilatation, coupled with shallow radiating incisions or nicks, if necessary, may be used with advantage to aid or take the place of dilatation by the presenting part. 5. Dilatation of the atresia should be as nearly complete as possible before the forceps are applied. 6. Care should be observed in the after-treatment of these cases, to maintain the patency of the vagina by irrigations, and the daily passage of suitable dilators. 7. In those cases in which the obstruction is unyielding or cartilaginous in character, or is complicated by the presence of a vesicovaginal fistula if, after a fair trial, it is seen that further delay is dangerous to both mother and child, Cesarian section should be resorted to, in preference to embryotomy and craniotomy. 8. In cases where the labor can not be terminated per vaginam, and in which the atresia is complete, so that the proper drainage of the lochia from the uterus is interfered with, a Porro operation should be performed in preference to a Cesarian section.

99.—See abstract in THE JOURNAL of Dec. 2, 1899, p. 1425.

110. **Blastomycetic Dermatitis.**—The case reported by Anthony and Herzog is one of blastomycetic dermatitis superposed on gummata. No other micro-organisms but blastomycetes were seen in the tissue.

111. **Leprosy.**—Morrow reports a case of the rare occurrence of macular leprosy on the scalp, in a sailor, 47 years of age. The patient had had syphilis and epilepsy prior to this affection. This case is also reported by him in his memoir on leprosy in "Twentieth Century Practice." Vol. xviii.

112. **Urethral Arthritis.**—The motive of Forbes' paper is to show that gonorrheal arthritis is due to the migration of the gonococcus, as is shown by experimental evidence, and by the fact that they have been found so rarely in other than the acute stages and that the gonococci do not tend to flourish in the joint, hence the rational treatment is to cut off the source of supply in the urethra: in other words, we must cure the urethritis to cure the arthritis. He reports an analysis of forty-three cases, which he thinks, in a general way, support his views; he gives a more detailed account of one case in particular.

116.—See abstract in THE JOURNAL of May 27, 1899, p. 1179.

118. **Hydrophobia.**—The case reported by Axtell is that of a boy 8 years old, who was bitten by a dog about three weeks before the beginning of the symptoms. The wound had healed up kindly. The case is of interest as giving symptoms of hydrophobia, or dread of water, in a child too young to be affected by the history of the disease and his imagination. The stage of excitement lasted two days. There was no paralytic stage, the spasms were not painful, the mental state was clear, and the abject terror or fear of water was typical. He asks: if the case was not one of hydrophobia, what was the cause of death?

120. **Detachment of Retina.**—The frequency of any evidence of spontaneous and post-operative detachment of the retina in myopic eyes is discussed by Fröhlich, who finds that the accident is much more frequent after operation than in cases unoperated on, and that adding the loss of sight from this cause and that from infection after operation, the total amounts to 5.5 per cent. He says all the new departures in surgery cause a sacrifice. Still, the course may be proper, and improved technic may later bring down the percentage of losses.

121. **Papillo-Retinitis and Chlorosis.**—Schmidt reports a case of double papillo-retinitis in a girl of 14, due to a chlorotic condition, as shown by the blood examination. The patient recovered under treatment, and the case is in many respects similar to that reported by Dieballa.

124. **Lenticonus Posterior.**—Pergens here reports a case of buphthalmus with pronounced keratoglobus, in a boy 4½ years old. The eyeball was enucleated and examined microscopically,

and found to be a case of lenticonus posterior, being the first case thus examined in man. There was a pyramidal cataract anteriorly. The other eye was normal. He gives a résumé of the cases in literature in which this condition has been diagnosed in man.

150. **Treatment of Insanity.**—Burr discusses, quite elaborately, the treatment of recent cases of insanity, and strongly advocates the rest-in-bed treatment, with the other methods found useful in these cases. Among the special methods he mentions are the "salt glow" or rubbing, followed by a cold bath. He thinks it is unadvisable to recommend change of scene and travel for neurasthenic and depressed patients.

FOREIGN.

British Medical Journal, Dec. 30, 1899.

Harveian Lectures on Treatment of Tuberculous Diseases. W. WATSON CHEYNE.—The third lecture by Cheyne, which is appearing in the British journals, is devoted to the subject of genito-urinary tuberculosis. In the male the epididymis seems to be the most frequently affected. After noticing the symptoms, he considers the methods of treatment, and after describing the operations of castration and epididymectomy, he rather favors the latter, considering it worthy of more consideration than it has yet received. When it alone can be used, he would prefer it to castration. Tuberculosis of the prostate requires surgical treatment only when there is breaking down and formation of pus, and in these cases it should be carried out early. Tuberculosis of the bladder may be treated either surgically or medically; in neither case can we insure a cure. Operations, however, are likely to give relief, if not absolute cure of the disease. The kidney is the most common seat of tuberculosis in genito-urinary disease, and may be affected either primarily or secondarily. After the diagnosis is made, which is of the utmost importance, as to which kidney is affected, and the extent and implication of other organs, the surgical procedures are nephrotomy and nephrectomy, total or partial. The former is only a temporary expedient and must generally be looked upon as a preliminary operation. Nephrectomy, to be justified, requires that the disease must be unilateral, and Cheyne doubts the reliability of ureteral catheterization in the diagnosis of these cases. The best procedure, in spite of its disadvantages, is, he believes, to cut down on the kidney supposed to be diseased, and ascertain the condition. In all cases where the kidney is removed, more or less of the ureter will also have to be taken. Of late years some good results have been reported from partial nephrectomy, though in many the subsequent removal of the remainder has been required. On the whole, however, the best results are obtained by nephrectomy, if the other kidney is healthy.

Essential Toxic Symptoms of Diphtheria. JOHN BIERNACKI.—The author suggests that the toxic symptoms of diphtheria are due to a rapid fall of blood-pressure caused by the diphtheria toxin, and he publishes a chart and reports a case which he thinks supports this view.

Lancet, Dec. 30, 1899.

Measures Taken at Tor and Suez Against Ships Coming from the Red Sea and the Far East. MARC ARMAND RUFFER.—The quarantine methods at the northern end of the Red Sea are described, also the conditions of the Mecca pilgrimage. According to Ruffer, the sanitary condition of the steamers carrying pilgrims to and from Jeddah are of the worst possible character, the Austrian boats alone being a marked exception. The quarantine station at Tor, at the foot of the Sinai range, appears to be on the whole as good as could be expected, and he considers the arrangements efficient against plague, but not against cholera. There are also serious defects as regards disinfection of the clothing of the passengers and crews of infected vessels, and the Venice convention regulations are very far from being as efficient and satisfactory as they should be. At present there is nothing to prevent vessels from carrying passengers in the incubation period of plague and cholera, through the Suez Canal into Europe, and the ultimate measures must be taken at European ports. In his opinion, in ship disinfection it is better to do a little well and thoroughly than a great deal badly. The great danger is the patient, the things in his immediate neighborhood and his soiled clothing, and it is comparatively easy to deal with him, but when attempts are made to enforce more general measures, and entail pecuniary loss, the door is open to every form of fraud, bribery, concealment and corruption.

Clinical Record (London), Dec. 20, 1899.

Combined Degenerations of Spinal Cord. RISIEN RUSSELL.—The disorders of the spinal cord here considered include certain species already recognized, but which the author considers as not clearly pathologically proven, such as ataxic paraplegia and lateral spinal sclerosis, and another form which he has recognized as existing, whether these others really exist or not. The disorder has not yet been assigned its proper place in the classification, its subjects having been considered as suffering from various conditions, such as myelitis, tabes, disseminated sclerosis, etc. Its etiology is obscure. Its pathology, as the name "combined degenerations" implies, is the disorder of various spinal tracts, and in some regions nearly the whole of the white matter except that which abuts immediately on the gray. Where the change is less extensive, the most marked damage is to the dorsal and lateral regions, while an area which varies in extent in the ventrolateral region escapes. The damage to the posterior column diminishes toward the caudal extremity, while that of the pyramidal tract diminishes toward the medulla. The greatest area affected is in the thoracic region. Tracts which are supposed to have their trophic centers in the gray matter of the column are more or less preserved. Microscopically, the conditions are, in their most pronounced state, a dense sclerosis, practically no nerve elements being left. He rejects the idea that the condition originates in anemia, though we do not find any very satisfactory explanation. The one that seems most satisfactory to him is the action of a toxin. The disease generally begins with weakness in the lower extremities, often with early sensory symptoms, such as numbness and tingling. A girdle sensation is frequent, and some patients complain of a persistent pain in the region of the liver. Shooting pains are sometimes felt in the legs. Some sphincter disturbance, especially of the bladder, is common and not long delayed. The first symptoms rarely appear in the upper extremities. When patients are under observation, the disease is generally advanced, but wasting is not usually apparent, though it occurs later. The faradic muscular reaction is diminished, while the galvanic is retained. The paraplegia is either spastic or the limbs are flaccid, though in the latter case there may be certain spastic phenomena. Flaccidity may be a sequel to the earlier spastic condition. The trunk muscles sooner or later become involved, and ataxia of the upper extremities is sometimes present, with loss of muscular sense, though the disease is more manifest in the lower extremities. Analgesia and anesthesia are there present. The knee-jerks are usually exaggerated, and ankle-clonus is commonly present. The plantar reflex, that is the extension of the toes instead of the flexion, as is normally the case, is a valuable sign, especially in cases where the reflexes are absent, as it distinguishes this form of paraplegia from that due to peripheral nerve affections. Trophic disorders are common, sacral bed sores, anasarca, etc. Toward the close of the disorder mental changes are noticed, most marked at night, when there may be delirium. The cranial nerves are seldom affected, except in the general asthenia in the advanced stage. The anemia is sometimes so marked that some cases may possibly be considered as pernicious anemia. In others it appears to play no part. The disease runs a rapid course, the average duration being ten months. The case longest under observation was one year and three months, the shortest three months. In every case in which this disease has been recognized clinically, in the hospital, by Dr. Russell, death has resulted.

Caledonian Medical Journal, January.

Notes on Condition of Cortical Nerve-Cells in Three Cases of Imbecility. J. MIDDLEMASS.—The author briefly reports three cases, two epileptics, another an imbecile not suffering from epilepsy, in which the nerve-cells of the second layer of the cortex, and in two the third layer also, were in the condition called by Bevan Lewis, "developmental arrest." If these cases are confirmed by other observations, he thinks they should prove of considerable importance as explaining the pathology of imbecility to be a fetal condition of these nerve-cells. One of

his cases would seem to indicate that epilepsy is not a constant accompaniment of this condition of arrest, as has been held by Lewis.

Bulletin Medical de Quebec, December, 1899.

Cardiopathy and Marriage. A. SIMARD.—The published statistics, the writer states, show that the mortality of heart disease aggravated by pregnancy and its consequences, is 13 to 61 per cent. Porak reports 88 out of 214 pregnant women with heart disease, prematurely delivered. The fetus is usually dead and is occasionally poorly developed when born at term. Two observations of mitral lesions much aggravated by pregnancy have led Simard to accept von Leyden's dictum that the physician should in general advise against the marriage of young women with valvular lesions. It is evident that pregnancy is liable to greatly aggravate an existing heart disease; also that pregnancies under these circumstances are frequently interrupted, which is another danger for the patient, and the puerperal state may prove fatal. But it must not be forgotten that numbers of women with heart lesions pass through pregnancies without apparent injury. In another of Simard's observations a young woman with aortic insufficiency came through her pregnancy unscathed. Jaccoud and Vinay assert that if the subject has never suffered from her heart affection and the lesions are compensated, there is no reason to forbid marriage, merely advising "maternity in moderation." Simard would acquaint the subject with the possible dangers, and if accidents have already appeared, positively forbid marriage.

Bulletin Medical (Paris), Dec. 20, 1899.

Renal Lithiasis in Children. COMBY.—In this communication Comby states that he has noted evidences of renal lithiasis in 100 out of 600 necropsies of infants, in the last two years, but not a single case of biliary lithiasis. Uric infarcts have even been noted in stillborn infants. The renal lithiasis is not hereditary, but acquired from improper or insufficient food. Most of the children were atrophied, dehydrated and with infections favoring acidity and concentration of the urine and precipitation of urates. In 48 examined more closely, 31 were boys and 17 girls; 28 were under 6 months old; 18 between 6 and 12 months and 2 between 1 and 2 years. Diarrhea was noted in 29; vomiting in 24; athrepsia in 14; various eruptions in 28 and rapid decrease in weight in 25. Symptoms are obscure on account of the age; nephritic colics are rarely recognized. Convulsions, dysuria, screaming, restlessness can sometimes be connected with the renal lithiasis. If the children survive their athrepsia, the calculi may persist and lodge in the urinary passages. The lithiasis of the youth and the adult may date from the earliest infancy. Prophylaxis consists in appropriate food and drink; in case of fever, copious enemata of water, or injections of artificial serum if there is gastric intolerance. A course at some watering-place is advisable in case of confirmed lithiasis.

Ventral Position in Treatment of Vesicovaginal Fistula. VITRAC.—The frequent failure of treatment in these cases is due to the incessant contact of the wound with urine. If this can be prevented, the wound heals rapidly, and this can be accomplished by accustoming the patient to lie in the ventral decubitus. This position and a permanent sound may alone effect a cure, and should be imperative after every operation, with possibly compression of the posterior wall of the bladder after suture of the fistula.

Presse Medicale (Paris), Dec. 20, 1899.

Search for Projectiles in the Skull with Radiography and the Contremoulin Apparatus. T. TUFFIER.—Remarkable results were attained with this apparatus in three recent cases in which the results of radiography and operation contraindicated the clinical manifestations. The apparatus is not very complicated. It fits over the head, and two radiographs are taken. The apparatus is then removed and a pair of long sliding needles inserted, which meet at right angles exactly at the point where the projectile is located. After anesthesia the apparatus is replaced on the head and the needles guide the surgeon to the spot.

Severe Polyuria and Its Relation to Lesions of the Pancreas. C. MONGOUR and GENTES.—"Beside the benign polyuria with still undetermined lesions, there is a severe polyuria commencing abruptly or consecutive to the former, the nature of which is still unknown. The evolution deceptively simulates the evolution of pancreatic diabetes, and we believe that it is connected with a lesion of the pancreas." This pancreatic lesion, neoplasia or fibrous degeneration is perhaps hypertrophic, respecting the acini comparatively. In all the observations the pancreas was hypertrophied. It is possible that the destruction of the cells is less complete than in the atrophic sclerosis encountered in diabetes. The lesion more resembles the results of experimental incomplete ablation of the pancreas or ligature of the pancreatic duct, which was followed by simple polyuria. In one observation, described in detail, a young man was suddenly affected with extreme weakness and vertigo, in the midst of his work, subsiding again in a few weeks but reappearing by the end of the year, during which polydipsia had been frequent, with rapid decoloration of the integuments, complete asthenia, no appetite, intense thirst, polyuria of five to six liters a day, no sugar, no albumin in the urine, continuous slight fever, extreme hypoglobulia. Death in coma followed in about a week. The only lesion found at the necropsy was the extraordinary woody hardness of the pancreas, which weighed 210 grams, with fibrous sclerosis between the acini. The pancreatic duct was dilated into an ampulla filled with clots and calcareous concretions, closing the lumen entirely on the side toward the intestines. In another observation of polyuria of 16 to 24 liters a day and great emaciation, ingestion of fresh pancreas reduced the amount of urine by several liters, but it returned to the previous amount every time on suspension of the pancreas. The patient was lost sight of. Polyuria has also been noted in a few cases on record with carcinoma of the pancreas.

Semaine Medicale (Paris), Dec. 13, 1899.

Gas Cysts in Intestines in Man. HOLSTEIN.—Two cases of gas cysts of the bladder are on record, noted at the necropsy, and several of the vagina, and they have been found at necropsies, in the intestines, similar to the intestinal cystic pneumatosis found in cattle and hogs. A microbian origin is obvious; Lindenthal and Dupraz have both isolated a coccus which reproduces these cysts in animals. The first case diagnosed *intra vitam* in man was reported by Hahn, last October. He succeeded in restoring the patient to health by a laparotomy, excising all the pedunculated cysts and crushing the others. They ranged from the size of a pea to that of a nut, scattered through all of the large and part of the small intestine. Comparing the symptoms observed in this case with the findings and anamnesis at necropsies, we note that the subjects have usually been affected with gastro-intestinal disturbances for a long time, with much distension of the abdomen, and obstinate constipation in which purgatives are impotent. Besides the constant constipation, there are symptoms suggesting gastric ulcer, pain in the epigastrium, vomiting of black or bloody masses, occasionally symptoms of ileus. The affection develops slowly and sometimes lasts several years. The subjects are generally much emaciated, and succumb to marasmus or intestinal occlusion. Examination of the abdomen affords the most valuable information. In Hahn's case elastic resistance to pressure was noted at various points, giving a tympanic sound on percussion, while echinococcus cysts give a dull sound. The stomach is considerably dilated and displaced by the tumefied intestinal loops. The probability of the transmission of the disease from pork imposes the necessity of stricter surveillance of meats.

Berliner Klinische Wochenschrift, Dec. 11 and 13, 1899.

New Scientific Basis for Organ Therapeutics. P. F. RICHTER and A. LOEWY.—We know that the uterus becomes atrophied after removal of the ovaries, and that the general organism is affected in various ways; in 25 to 35 per cent. the subjects grow fat. The experimental research here reported shows that the interchange of gases and consumption of oxygen are materially diminished after castration. The difference becomes striking by the tenth to fifteenth week, possibly coinciding with the atrophy of the uterus, and suggesting that it may at first substitute the missing ovaries. The consumption of oxygen diminishes constantly and permanently, an average of 10 per cent. The oxidating power of the protoplasm, which has the metabolism in charge, is reduced—the metabolism falls off

9 per cent.—and this reduction is the cause of the gradually developing obesity which may be mechanical—the body passive—or it may be an organic anomaly leading to the accumulation of fat by the altered destructive powers of the cells. This fact of the diminished interchanges after castration affords a test for organic or "substitution therapeutics," and oöphorin—ovarian substance—has responded to the test. When the effect of castration is at its height, that is, in about fourteen weeks, ingestion of oöphorin promptly restores the interchanges to normal and not only restores the consumption of oxygen to normal but raises it above normal. On suspension of the oöphorin the former conditions return in a week. This influence on oxidations suggests its therapeutic application in all cases in which the oxidating power is subnormal, as in obesity, either constitutional or consecutive to castration or the menopause. Normal, uncastrated animals were not affected in any way by the oöphorin, whose harmlessness has been fully established. Thirty tablets a day have been taken with impunity (Burghardt). It was also noted that the consumption of oxygen diminishes after castration in male animals, the same as in females, but much more rapidly, in days instead of weeks. Thyroid and ovarian medication can scarcely be compared, as the loss of the thyroid function is so profound and far-reaching in its effects. The difference between them is most evident perhaps, in their effect on normal subjects. Loewy reports experiments which tend to establish that oöphorin has no influence on the albumin metabolism. The increased metabolism that follows ingestion of oöphorin is at the expense of the non-nitrogenous elements. Virchow urges further research to determine the essential and non-essential elements of the ovary. His study of the suprarenals has shown that the juice in these organs is exclusively limited to a certain portion of the organ, between the cortex and the medulla. "Possibly the Graafian follicles might be cut out and used exclusively for ovarian medication." Loewy has succeeded in isolating an effective substance from the ovaries, leaving an ineffective residuum, but it rapidly deteriorates. Jacobs of Brussels makes an ovarian wine. Pinkus has recently stated that the fear of phenomena due to the loss of the ovaries is much exaggerated, and that the general consensus of opinion at the late gynecologic congress was that it seems to be immaterial whether or not the ovaries are left in operating. Fritsch has never had a case of serious trouble from this cause in six hundred total vaginal extirpations, and as many more ovariotomies.

Acute Lead Poisoning. W. ZINN.—Symptoms of acute intoxication appeared six hours after ingestion of what was supposed to be sodium bicarbonate. The diagnosis was made from the line on the gums, and the presence of lead in the urine, still perceptible in twenty-five days. It was found that a teaspoonful of a silver polish had been taken by mistake. It contained about 15 gr. of lead oxid. The syndrome continued for ten weeks, assuming a more chronic character after the first; pulse 66 to 68; complete recovery.

Centralblatt f. Chirurgie (Leipsic), Dec. 30, 1899.

Treatment of Chronic Hydrops Genu. G. MUELLER.—The patient stays in bed a few weeks with a bandage of starched gauze wound from the foot above the knee with considerable compression, the limb raised. Another tighter bandage is wound over the first the next day and so on. Then wedge-shaped pieces are cut out of the bandage over the knee, and the bandage applied still tighter. The leg above the knee is massaged during this time. The bandage is removed at the end of eight days, and the joint will usually be found entirely free from swelling. The leg is then massaged also below the knee, and the joint douched with alternate hot and cold water for five minutes a day. Later come passive and then active and resistance gymnastics of the knee, and the patient is dismissed with an elastic knee-cap and the admonition to refrain from all but light work, especially lifting or carrying heavy burdens. If the hydrops recurs, then the only means to cure it is by relieving the joint of all weight and work with a Hessing splint or a home-made contrivance for the same purpose.

Deutsche Medicinische Wochenschrift (Leipsic), Dec. 14, 21, 28, 1899.

Cholecystotomy with Water-tight Drainage. POPPERT.—The number of cases treated by Poppert's method is now 162, and experience is confirming its value. The gall-bladder is opened and evacuated as usual, and then a stout Nèlaton catheter is inserted and the wound sutured around it, the thread passing through the surface of the catheter in both the deep and superficial sutures. A safety-pin is also passed through the dressings, and a rubber tube connects it with a glass receptacle. Before the final closing of the wound, a few strips of gauze are packed around the catheter. The dressings are changed in five or six days, and then twice a week. The tampons are loosened and gradually removed until all have been taken out in two or three weeks. The irritation of the gauze ensures a reliable packing around the catheter. The gall-bladder is thoroughly flushed as the catheter is removed, usually by the end of the third week, and stones sought with the sound and curette. Among the advantages of this method of drainage are its applicability to cases of all kinds, shriveled, friable gall-bladders, abnormal position, etc., the simple technic, and that it protects against infection of the abdominal cavity. Hernia or fistula has never occurred in any case. The method is especially advantageous in choledochotomies—29 cases. It ensures the success of the operation even with complications, and has given patients greater confidence. Before 1897 only forty-four had applied for operation, but since then the number has risen to 233.

Etiology of Epidemic Cerebrospinal Meningitis. L. ZUPNIK.—A young man was brought to the clinic with a fatal case of cerebrospinal meningitis, and a meningococcus was derived from lumbar puncture, supposed to be Weichselbaum's coccus, but differing by certain peculiarities in culture, resembling more the gonococcus. Comparing the bacteriologic studies of this disease, on record, Zupnik is convinced that the causative agent of epidemic cerebrospinal meningitis is losing more and more the specific character once attributed to it. Besides Fraenkel's pneumococcus and Weichselbaum's meningococcus, Pfaundler has observed two different "types," and Kister a meningococcus, while the micro-organism found by Zupnik and probably identical with one described by Pfaundler in a recent work, adds another to the list. "It seems evident, therefore, that epidemic cerebrospinal meningitis is an infectious disease which, like other infectious processes, such as pneumonia, endocarditis and acute suppurations, has no single etiology. The epidemic character of the disease can be explained by assuming that the cause is not in the micro-organism itself, but in certain external deleterious influences which simultaneously affect and lower the resistance of large numbers of persons."

Formation of Sugar from Albuminoids. F. BLUMENTHAL.—This review concludes with the statement that the formation of glycogen after ingestion of albumin does not depend entirely on the carbohydrate group in the albumin molecule. The glycoside nature of albumin and glycogenesis must still be considered entirely separate, "and no well-founded and unassailable theory in regard to glycogenesis yet exists." The abundance of carbohydrate groups in glycogen-free animals, which the writer has established, may explain the glycogenesis after ingestion of casein, leucin, urea, etc., by the formation of the glycogen from carbohydrate groups already on hand. The glycoside nature of all albuminoids, with the exception of casein, suggested to Pavy the idea that the casein might have lost its carbohydrate, which it had abandoned to the milk in some fermentative process. Extending this conception of a fermentative process to the organism, it would explain that severe form of diabetes in which sugar is formed in spite of the absence of carbohydrates from the food. The albuminoid is unable to retain its carbohydrate; abandons it and it is eliminated. According to this theory the carbohydrates must disappear from the albuminoids in severe diabetes, but this fact has not been confirmed, and the writer's investigation of the nucleoproteids of the liver and pancreas at the necropsy of a case of diabetic coma, showed them intact, also the albumin of the liver. The absence of a carbohydrate in casein explains the value of milk diet in diabetes, advocated by Leyden and Winternitz among others. (See THE JOURNAL, xxxiii, p. 1546.) The fact that carbohydrates abound in numbers of albuminoids suggests the question whether this is important in the diet of diabetics. If we accept tests *in vitro* as evidence, we must exclude the thymus, liver, etc., as organs rich in nuclein, but the writer asserts that since the discovery of the glycoside nature of the

nucleoproteids of the animal kingdom, we know of no diet that is free from carbohydrates, and especially muscle. Since carbohydrate groups have been found in the albuminoids of eggs, liver, muscle, etc., we have learned that as we determine the relation between different carbohydrates and the elimination of sugar by the individual diabetic, we must also investigate in the same way, the influence of the different albuminoids, on the elimination of sugar.

Diagnostic Significance of Acute Effusions in the Abdominal Cavity. H. BRAUN.—Since calling attention, in 1891, to the effusion that follows internal incarceration and accumulates so rapidly that its presence is soon disclosed by percussion, Braun has noted the effusion in a number of cases and at necropsies, but has also noted a number in which, with apparently favorable conditions, the effusion did not occur. He appeals for further study of the phenomenon, to establish its exact clinical value, and ascribes great importance to it. The acute effusion occurs with torsion of the intestine on its axis, inducing venous congestion, and with incarcerations of a portion of the intestine in abnormal cavities or openings, either congenital or formed by ligaments or a diverticulum, less frequently with invaginations. An acute effusion indicates the non-existence of ileus from a foreign body or a tumor. In every case of internal incarceration in which an acute or rapidly increasing effusion is noted, laparotomy should be urged or done at once, because it is in these cases particularly that the intestines become rapidly altered and gangrene ensues. When the abdomen has been opened on the probability of an internal incarceration, and a blood-stained fluid flows out, the trouble causing the effusion must be sought and found in every case, without resorting to an artificial anus. Torsion of the sigmoid flexure frequently causes enormous meteorism, and the systematic search for the trouble indicated by the acute effusion will save many a life doomed without it.

Origin of Leucocytosis and of Transportation of Bone Marrow Cells to Other Localities. P. LENGEMANN.—Normal bone marrow has a certain consistency, but after intraperitoneal injections in rabbits, of liver or kidney broth, or infection with staphylococci or the bacterium coli, or intoxication with sodium cantharidinate, etc., the marrow becomes dark red, almost black, and so soft that it is nearly fluid. The microscope shows that the leucocytes are more numerous than elsewhere in the blood, in the small spaces which are noted occasionally here and there in normal marrow, filled normally with blood, without walls, the blood washing the cells of the parenchyma or walled in by a delicate membrane. Some of the leucocytes only slightly project into the blood; others are only lightly attached to the parenchyma: others float freely in the fluid. As the marrow becomes dark red and soft, these spaces without walls become very much larger and more numerous, and the leucocytes are swept away by the increased volume of blood, and appear elsewhere in the circulation as a pronounced leucocytosis. The non-leucocytic elements of the bone marrow become so soft that even a slight jar is sufficient to detach a particle, and all these corpuscles, particles, etc., are swept by the venous circulation into the lung capillaries, and on into the main circulation, except the larger, which are sifted out and detained in the capillaries, where the giant nuclei gradually break up into grains and crumbs rich in chromatin, while marrow cells may drift into remote arterial vessels and long remain unaltered. The hyperemia gradually subsides, and by the eighth day the marrow contains less blood than in normal conditions. The blood is crowded out of the spaces mentioned above, by the results of greatly increased mitosis in the cells of the parenchyma, leucocytes, etc. Even the giant cells show more mitosis than usual. It is evident from the research here reported that the marrow becomes involved in many more affections than has been heretofore supposed, and that the processes accompanying leucocytosis induce marked alterations in the marrow.

Gazzetta Degli Ospedale (Milan), Dec. 10, 1899.

New Ocular Tonometer. P. GRADENIGO.—The instrument described and illustrated automatically records, in the most delicate manner, the degree of tension and its slightest variations, according to the writer's experience, free from all the inconveniences of others. The patient lies in the dorsal decubitus, wearing some stout test spectacles with adjustable rings in the center of each lens space. The gauge fits into and is held by one of these rings, after a few drops of cocain have been instilled and the lids held mechanically apart. The gauging is done with a glass rod sliding loose in a glass cylinder 44 mm. long, and the diameter of the cornea, projecting beyond at the other end, where a long index registers its movements.

Nordiskt Mediciniskt Arkiv (Stockholm), Nov. 30, 1899.

"Sermo de Pondere et Longitudine Infantum Recens Natorum." H. ADSERSEN.—The weight and length of newly-born infants, as noted at various maternities, etc., are tabulated in the attempt to prove that they obey certain laws in respect to the astronomic months, analogously to the laws that have been established in respect to the growth at different years of life. It is remarkable how invariably the curve representing the length reaches its highest point in September. He urges others to note the weight and length of the newly born for an international collective investigation which may reveal important facts in regard to the influence of the locality and climate, as well as the calendar.

Primary Sarcoma of Small Intestine. F. WESTERMARK.—The neoplasm usually starts in the submucous tissue, where it may make its way as a thin plate, soon invading the muscular layer and the mucosa of the intestine, while the serous membrane escapes degeneration much longer. Sometimes the infiltration forms a sheath around the intestine without a so-called tumor, and the intestine in time becomes a rigid tube. In other cases the invading tumefaction develops under the peritoneal portion of the intestinal wall, forming masses of tumors covered with serous membrane, or it may develop into the lumen of the intestine. The symptoms in the three personal cases, added to the twenty-nine in literature, were dysuria, dull pain in the abdomen, colics and rapid emaciation commencing about three months before operation in two cases. A third had no pain or other abdominal symptoms, merely languor, pallor and rapid emaciation for a few months; the compact, movable tumor extended lengthwise across the abdomen, and recurred in five months after operating. In one case the tumor was the size of a man's head, oblong, irregular, not movable, the chief portion projecting into the small pelvis. This patient recovered. One died of ileus five days after operation.

Treatment of Gangrenous Hernia. J. H. AKERMAN.—The writer sent out a circular requesting the communication of the experiences of others in this line, and has compiled the 235 replies, in tabulated form with numerous particulars: 60 inguinal, 171 femoral, 2 umbilical, and 1 each of hernia lineæ albæ and obturatoria. The total mortality was 49.3 per cent. or 116. The mortality rose progressively from 25 per cent. after one day's incarceration, to 77.7 per cent. after that of six days; 66.6 per cent. after seven and 70 per cent. after eight days and longer. He remarks that these tables will probably prove very interesting reading in ten years, when he proposes to compile a similar article, for comparison.

Societies.

Rock River Medical Association.—The semi-annual meeting of this Association will be held at the Galt House, Sterling, Ill., January 24, at 10:30 a.m.

Mobile (Ala.) County Medical Society.—Newly-elected officers of this Society are: president, Wm. B. Pape; vice-president, C. N. Owen; secretary, G. H. Fonde; treasurer, J. G. Thomas.

Berks County Medical Society.—At the recently held annual meeting of this Society at Reading, Pa., the following officers were elected: president, F. W. Frankhauser; secretary, J. W. Keiser; treasurer, A. S. Raudenbush.

Johnson County Medical Association.—At the recent annual meeting, held at Iowa City, Iowa, this Society elected the following officers: president, James Murphy; vice-president, J. P. Mullin; secretary and treasurer, J. G. Mueller.

Springfield Medical Society.—This Missouri Society held a meeting recently, at Springfield. The newly-elected officers are: president W. C. James; vice-president, J. W. Williams; secretary, N. F. Terry; treasurer, D. B. Farnsworth.

York County Medical Society.—The newly-elected officers of this Pennsylvania Society are: president, W. C. Stick; vice-presidents, R. E. Butz and A. C. Rice; secretary, R. A. Harding; treasurer, J. F. Klinedinst.

Marion County Medical Society.—This Indiana Society celebrated its 25th anniversary the 2d inst., and elected officers as follows: president, William V. Morgan; vice-president, Frank Ferguson; secretary, Theodore Potter; treasurer, P. Scherer.

Madison County Medical Society.—This Indiana Society, at a recent session held at Anderson, elected the following officers: president, G. A. Whittledge, Anderson; vice-president, C. W. Suttner, Elwood; secretary, H. W. Collier, Anderson; treasurer, E. M. Conrad, Anderson.

Charlotte Medical Association.—At the recent annual session of this Association, held at Charlotte, N. C., the election of officers resulted as follows: president, C. M. Strong; first vice-president, J. R. Irwin; second vice-president, Annie Alexander; secretary and treasurer, W. H. Wakefield.

Fayette County Medical Society.—The following officers were elected at the recent session of this Society, at Uniontown, Pa.: president, John H. Davidson; vice-president, Charles H. Smith; secretary and treasurer, Levi S. Gaddis; assistant secretary, John D. Sturgeon; censor, J. C. McClenathan.

Nashua Medical Association.—This New Hampshire Association has just held its annual meeting at Nashua. The newly-elected officers are: president, Frank E. Kittredge; first vice-president, H L. Smith; second vice-president, Geo. F. Wilbur; secretary, Ella Blaylock-Atherton; treasurer, Albert Guertin.

Kansas City Academy of Medicine.—The Academy will hold its annual banquet February 6. The annual meeting and election of officers was held the 6th inst., resulting as follows: president, Jabez N. Jackson; vice-president, J. M. Langsdale; treasurer, C. Lester Hall; censor, B. C. Hyde; secretary, Ralph J. Brown.

Darke County Medical Society.—This new Society was organized at Greenville, Ohio, recently, with the following officers: president, A. W. Rush; vice-president, M. M. Corwin; secretary, W. T. Fitzgerald; treasurer, Donavan Robeson. Regular meetings are to be held the second Thursday afternoon of each month.

Weber County Medical Society.—At a regular meeting of this Utah Society, the 2d, the following officers were elected for the ensuing year: president, H. J. Powers, Ogden; vice-president, G. A. Dickson, Ogden; secretary, H. B. Forbes, Ogden; treasurer, T. S. Wadsworth, Morgan; librarian, E. M. Conroy, Ogden.

Medical and Surgical Society of Western Illinois.—This Society met at Whitehall, Ill., recently. Officers were elected as follows: president, H. W. Smith, Roodhouse; first vice-president, J. S. Williams; second vice-president, J. W. Hairgrove, Jacksonville; secretary, W. C. Chapin, Whitehall. The next meeting will be held at Carrollton, May 4, 1900.

Hartford Medical Society.—The annual meeting of this Connecticut Society, held recently, resulted in the following choice of officers for 1900: president, S. B. St. John; vice-president, George R. Shepherd; secretary, J. E. Root; treasurer, George K. Welch; librarian, F. T. Simpson. The Society is considering the establishment of a museum, also a laboratory for original research.

New York State Medical Association.—The sixteenth annual meeting of the Fifth District Branch of this Association will be held in Brooklyn, May 22, 1900. Diabetes is the topic for discussion. Fellows who are interested in this and have any clinical data to present or theories to offer, are asked to correspond with E. H. Squibb, secretary, P.O. Box 760, Brooklyn, N. Y.

Brashear Medical Society.—This Society held its first quarterly meeting at Bardstown, Ky., on the 8th inst., and elected the following officers: president, J. J. Wakefield, Bloomfield; vice-president, W. W. Ray, Springfield; secretary and treasurer, Wiley Rogers, Taylorsville. Our correspondent informs us that the Society was named in honor of Dr. Walter Brashear, who lived at Bardstown, Ky., and in 1806 did the first hip-joint amputation ever performed in America and the first successful one in the world.

Cumberland County District Medical Society.—The January meeting of this Society was held at Bridgeton, N. J., the 9th. After some routine business the society listened to a paper on "Idiopathic Tetanus," by H. G. Miller, of Millville, N. J. This paper elicited quite general discussion, and there were several interesting cases reported. The next meting will be in Bridgeton, in April.

Cumberland County Medical Society.—Officers of this Society were chosen as follows, at the meeting held in Carlisle, Pa., January 9: president, J. C. Davis, Carlisle; first vice-president, M. M. Dougherty, Mechanicsburg; second vice-president, George C. Bourst, Newville; secretary, Hilda H. Longsdorf, Carlisle; corresponding secretary, J. W. Lefevre, Boiling Spring; treasurer, J. W. Bowman, Riverton.

State and Local Boards of Health.—The tenth annual meeting of state and local boards of health of Ohio will be held in Columbus, January 25 and 26. A cordial invitation is extended to all officers and members of boards of health to be present. But few papers have been provided, so as to allow full discussion of the subjects presented. A reduced rate of one and one-third the regular fare has been granted on all railroads in Ohio, on the certificate plan, when the full fare is more than 75 cents. Tickets going may be purchased not more than three days before January 25, and tickets for return not later than three days after January 26, Sunday not being counted. C. O. Probst, Columbus, is secretary.

Cincinnati Academy of Medicine.

Dec. 18, 1899.

CASE OF ALOPECIA AREATA.

DR MEYER L. HEIDINGSFELD presented a patient of interest in that this disease had developed at the age of 2½ years. Out of the fifteen to twenty cases that had come under his observation, the present was the one patient in whom the disease had developed so early. The etiology in this instance is a little obscure. The spots which are present on his head are perfectly bald and are smooth and shining. There is also a nervous element which may be a causative factor in the development. The child does not sleep well, and is not strong. In persons of more advanced age, mental anxiety, financial reverses, and death losses of various kinds are supposed to exert not a little influence. Some investigators think the disease is dependent on the clinical fact that it is very liable to occur in epidemic form, for instance, in prisons, particularly where there are a large number of prisoners, fully two-thirds of the inmates may be attacked. Another reason for this theory is that it responds very promptly to antiparasitic treatment, especially to chrysarobin and the perchlorid of mercury given by the cataphoric method. The prognosis is usually favorable, except where there is a neurotic element, as in the present instance.

INTRALIGAMENTOUS CYST.

DR. C. L. BONIFIELD presented this topic. The cyst, when in the abdomen, was of large size, reaching to above the umbilicus. The three most common forms of cysts in this region are the ovarian, the parovarian, and the ordinary ligamentous cyst. Of the last there are the unilocular and the multilocular. The true ovarian cyst is always multilocular, and usually contains a fluid of varying thickness. The broad ligament cyst was very well represented by the specimen he presented, in that it had a very thin wall and clear lymph-like contents. They may assume the papillary form and even be semimalignant, particularly if the sac is ruptured and the contents allowed to escape in the peritoneal cavity. In the present specimen there was no evidence of an ovary, nor was it multilocular. Goodell was the first to popularize the method of removing these cysts, but Minor of Buffalo was the first to call attention to this method of operating. At first, however, the operation consisted only in opening the cysts, removing their contents, and stitching the cyst wall to the abdominal parieties, a drainage-tube being inserted. In this day this necessity of such free drainage does

not exist. In this patient he closed up the rent in the broad ligament with a row of sutures extending from the mesocolon across and down one side of the uterus.

APPENDICES.

DR. EDWIN RICKETTS presented these specimens. In one instance, a boy, 12 years of age, was suffering from his third attack of appendicitis. During the twelve hours previous to seeing the case, the patient suffered so much that it had become necessary to give him morphia hypodermically. During the two previous attacks the patient also had considerable pain in the appendiceal region. On opening the abdomen the appendix was found flexed upon itself and laid down on the inner side of the intestine. About a teaspoonful of pus was found at this point, while a little lower down was found another pocket of pus.

GALL-STONES.

DR. GILES MITCHELL presented some stones he had removed. He first saw the patient about ten days ago. She gave the usual history of periodic attacks of localized pain and constipation extending over a period of three to four years, and was slightly jaundiced. She was suffering from an acute attack of colic, the temperature 102.5 F. There were three stones, quite large and showing facets, and they were of the mulberry variety. The fluid in the gall-bladder was clear and almost colorless. The smallest of the stones was well down in the duct, and was removed with some difficulty.

VAGINAL SECTION.

DR. C. D. PALMER, in his paper, while recognizing the fact that abdominal section was often preferable in the diagnosis and treatment of lesions of the pelvic viscera, thought that there might not infrequently be cases which could be relieved equally as well by the vaginal route and without the danger which always attends abdominal section. Vaginal section implies a division of the tissues of the vaginal vault into the peritoneal cavity, and the opening might be made either anterior or posterior to the cervix uteri. He prefers the posterior section, as it is more easy of execution and safer, with fewer blood-vessels, and is the better for diagnosis and treatment. The posterior opening having been made, the fingers of the operator can be readily introduced, and the size, shape, position of the uterus, new growths if any, and the condition of the peri-uterine structures easily mapped out. Any fluid that may be present in the most dependent part of the peritoneal cavity can be effectually evacuated. Bimanual examination can be performed with the greatest facility, and the appendages if necessary, be drawn down into the vagina. Irrigation can also be performed without danger and free drainage secured without difficulty. No stitches are necessary, and the wound usually closes without loss of time when the packing is removed. Convalescence is not prolonged and is usually painless. In septic conditions of the pelvic organs, uterine curettage should first be performed before resorting to more radical methods. If not successful, removal of the diseased organs can be as readily done and with as good result by the vaginal as by the peritoneal route. Old chronic peritoneal exudates with adhesions, not large but extremely painful, and when not situated too high up, will often undergo resolution after vaginal section. Pelvic abscesses, when not complicated with disease of the appendages that requires removal of the latter, are best treated by this method. However, when the abscesses are multiple, as they are not infrequently, they can perhaps be best treated from above. Selected cases of ectopic gestation, particularly in the earlier months and when the growing mass bulges into the vagina, can be easily and successfully treated by section through the vagina. A prolapse of the ovary, which is usually complicated with chronic adhesive conditions within the pelvis, and which is often associated with great pain and a depressed condition of the entire economy, may also be successfully treated by removal through this route. Retroflexion with retroversion when without grave adhesions, can often be treated by attention to the usual details of dress, posture, pessary, etc.; but when the strength of such adhesions resists such treatment, these posterior adhesions can be as readily treated by the vaginal as by the abdominal section. On the other hand, this operation may be overdone. It can not entirely supersede abdominal section in all cases of pelvic disease, either as regards diagnosis or treatment. Well-defined cases of pyosalpinx, ovarian abscess, all pronounced ovarian cysts of whatever kind or size, fibroid tumors of the body of the uterus, intramural and of good size, seriously diseased appendages, shortening of the round ligament for retroversion, are managed best by the abdominal section. Success in operation very often depends on free inspection and easy manipulation; unquestionably, abdominal section renders the pelvic organs the more accessible. Vaginal section is rarely attended with danger. The vagina must be cleansed as carefully as possible. Posture will usually prevent the intestines from descending far enough to be injured. With the exercise of ordinary care the ureters and the uterine arteries will escape injury.

Philadelphia Pathological Society.

Dec. 14, 1899.

SARCOMA OF ORBIT AND CHOROID.

DR. G. E. DE SCHWEINITZ read a paper on, and presented specimens of choroid and orbit, with recurrence in the latter. The patient was a butcher, 36 years of age. Five years previously the left eye began to trouble him and he was told to consult an ophthalmologist. The patient was first seen in May, 1899, at which time the eye was glaucomatous. It was removed on May 12, 1899. Rapid recovery ensued and he enjoyed good health for six months, when recurrence was noted in the orbit. The entire orbit was then eviscerated. The growth apparently had its origin near the entrance of the optic nerve. The lens was cataractous. On microscopic examination the episcleral vessels were found enlarged. The ciliary granules were found near the entrance of the optic nerve, and similar pigment granules scattered in different areas. Cylindric cells were noted in abundance. The nerve bundles were infiltrated. The central artery of the retina was filled with the granular material. The growth was therefore a melanotic sarcoma.

SYPHILIS OF THE LIVER.

DR. J. A. SCOTT presented a specimen and read a paper on this subject. Previous to 1847 few cases of syphilis of the liver had been reported. In over 3000 cases of syphilis reported by one writer, the liver showed manifestations of the disease in only nine instances. Hutchinson considered this organ the most common seat of the disease in the later stages of syphilis. The liver seems to be more frequently affected in those cases in which there is only a slight rash present. Osler described three types of syphilis of the liver. In this organ, the changes noted are whitish or grayish growths on the surface, and in some instances soft cicatricial or gummatous areas may occur. In certain cases friction sounds of perihepatitis may be heard. Enlargement of the spleen has been noted. Dropsy is common.

This patient was a man 60 years of age, who had suffered from all the diseases of childhood. Forty years previously he had a chancre, but under appropriate treatment no other symptoms had been manifest. About one year previously the abdomen became prominent, but there were no symptoms of the previous disease, and the patient only thought he was becoming stout. In April, 1899, the abdomen was filled with fluid, and the man was subsequently tapped several times, and in all, twenty-nine gallons removed. Neither the liver nor spleen appeared to be enlarged.

At the autopsy, the liver was found adherent to the anterior wall and ribs. The pleuræ contained serous fluid. The spleen weighed 1200 grams, the kidneys were swollen, and the liver weighed 2200 grams; a large, deep, transverse scar was found between the two lobes. The pancreas was in the dislocated long diameter of the body, so that the head was turned upward. In the liver, the blood-vessels showed distortion and thickening of the intima.

DR. L. N. BOSTON also presented a specimen of syphilis of the liver. The patient was a woman, 32 years of age. For the previous six months the abdomen had increased in size, emaciation had been marked, the skin had been lemon tinted, and vomiting of blood had occurred. On Aug. 24, 1899, a large amount of clear serum was removed from the abdominal cavity.

At the autopsy, the heart was normal, spleen enlarged, kidneys congested; the liver was yellowish-gray in color, and con

tained small yellowish-gray spots from the size of a millet seed to that of a pea, and surrounded by bands, the center being somewhat depressed, microscopic examination showed the liver cells well formed, but there was an excess of fat near the periphery of the lobules.

DR. JOSEPH MCFARLAND stated that the principal change noted was cirrhosis with puckering of the capsule.

DR. W. M. COPLIN spoke of a similar condition of the liver occurring in a girl who had died of typhoid fever.

DR. J. D. STEELE several years ago saw a specimen of liver obtained from a typhoid case, in which there was a small circumscribed process showing a great increase of connective tissue.

DR. DAVID RIESMAN was of the opinion that the specimens were of syphilitic liver, yet he held that there might also be other diseases which could show this change.

DR. ALFRED STENGEL thought the specimen presented by Dr. Boston more characteristic of syphilis of the liver than that of Dr. Scott. The latter specimen he considered quite rare.

DR. J. A. SCOTT, in closing the discussion, said that there could be no doubt that his patient had previously had syphilis. He had been treated by a noted physician of this city.

CARCINOMA OF ESOPHAGUS.

DR. A. A. ESHNER presented a specimen of this affection, from a patient 60 years of age. The usual symptoms had been noted. The red blood-cells numbered 3,225,000 per cubic millimeter. The seat of the lesion was about eleven inches from the teeth. At the autopsy, the locality was found ulcerated and contained cheesy masses. The lungs also contained tubercles. Cultures made from the ulcer showed diplococci and pneumococci. Section proved the growth to be an epithelioma.

CASE OF ANTHRAX.

DR. J. H. JOPSON and DR. A. A. GHRISKEY reported a case of anthrax. The patient was a man 48 years of age, an employee in a morocco factory. He had previously been working with raw hides received from Turkey. Infection had been through a scratch received on the forearm. A few days after the injury of the part, a swelling was observed. Some time later a number of small vesicles surrounded this area, the central zone of which began to turn dark. He was etherized and an incision made over the inflamed area, but no pus was found. Gelatinous material was found in the region of the olecranon. Subsequent to the operation, temporary improvement occurred, but death finally resulted. A bacterial examination was made from the contents of one of the vesicles. Inoculations were made on glycerin agar and other media, and stained with Loeffler's alkaline methylene blue solution. Large bacilli were numerous, as were staphylococci. Subsequent inoculation into a white mouse produced death.

In Pennsylvania the disease is very rare. Outbreaks have occurred in Louisiana, Delaware, New Jersey and Pennsylvania. The disease has been known to result from the importation of hides received from China, Siberia and South Africa. Death in these cases probably results from metastasis to some of the internal organs.

DR. A. A. GHRISKEY followed with a detailed account of how the cultures were made in this case. In 10 per cent. glycerin and on agar, the growths had been characteristic, showing the ribbon-like bands. With a low power lens, the curling or wavy lines were noted. Inoculations made on a white mouse caused death and from the heart's blood pure cultures of the bacilli were found, which stained with Loeffler's alkaline methylene blue. The bacilli were large, non-motile, and occurred in chains.

Philadelphia County Medical Society.

Dec. 13, 1899.

TRAUMATIC PUNCTURE OF EAR-DRUM.

DR. FRANCIS A. PACKARD read a paper with this title. In a series of 1500 injuries to the ear, treated in the Pennsylvania Hospital, the membrana tympani had been ruptured in 11 instances. In a series of 5400 cases of injuries to the ear, reported by Randall, the ear-drum was found ruptured in 8 instances, while in another series of 731 cases, reported by another writer, perforation was found 18 times. In the series of injuries producing this condition, as found in the statistics of the Pennsylvania Hospital, the accident occurred from the following causes: 2 from falls upon the head; 2 from foreign bodies; 1 while bathing; 1 from rarefied air while the patient was in a casing; 1 from a weapon; other causes operated in the other cases. The drum membrane has often been ruptured during irrigation of the external ear. One writer reported a case occurring during the vomiting of pregnancy, and many have occurred as a result of "boxing" the ears. The condition has often been noted as a result of the explosion of gunpowder. In another case a stroke of lightning was the cause. The treatment is very simple, for the most part expectant. The procedure followed in the above series of cases was to simply keep the parts cleansed.

DR. L. J. LAUTENBACH reported a case in which a sailor had sustained a rupture of the drum membrane as a result of the discharge of a large gun on board a man of war. In this instance a shred of the membrane was blown off. This condition has been noted in several instances. The accident is more apt to occur when the person stands in what is called an exposed part of the vessel, than when he stands in what is called the "nodal" point. Rupture of the drum membrane occurs in patients suffering from nephritis.

DR. F. A. PACKARD, in closing the discussion, stated that rupture of the drum membrane was observed in sailors after the battle of Santiago, when the men did not have time to take the necessary precautions against this accident, whereas at the battle of Manila, when everything was planned previously, and when the men had placed cotton in the ears, such injuries did not occur.

VAGINAL DRAINAGE IN SUPPURATION.

DR. GEORGE ERETY SHOEMAKER read a paper entitled "A Successful Operation, Preliminary Vaginal Drainage, and Subsequent Laparotomy in a Severe Case of Pelvic and Abdominal Suppuration." Mrs. K. G., aged 33 years, married, had two miscarriages, the last one three months previously. There had been high fever, distension of the abdomen, and dulness in the pelvic region. Incision into the posterior cul-de-sac evacuated a large collection of pus. After its discharge a rather hard tumor was felt above the pubic bone, which was pushed downward, incised, and a large collection of greasy, purulent material escaped. Drainage completed the operation. The patient returned five months later, and the remainder of the dermoid cyst was removed without difficulty. The histories of two other cases were cited.

N. Y. Academy of Medicine.

Section on Pediatrics, Dec. 14, 1899.

ICHTHYOSIS.

DR. ROSA WELT-KAKELS exhibited a girl 12 years old, afflicted with ichthyosis, most marked on the soles.

DR. A. JACOBI remarked that by percussion, while the child was leaning forward, he had been able to determine the persistence of the thymus gland in this patient. By warm baths, lasting continuously for two or three days, and by the internal use of arsenic and of the thyroid extract, he thought she might be improved.

INTUSSUSCEPTION.

DR. FREDERICK KAMMERER opened the evening's discussion on this by some remarks on the treatment. Regarding the injection of fluid into the rectum, he said that this method is only applicable to cases of the colic or of the ileocecal variety. At one time he made some experiments which convinced him of the futility of attempting to reduce an intussusception of the small intestine by enemata given at a pressure which would not be likely to cause rupture of the colon. In young children a hydrostatic pressure of more than three or four feet should not be used; the quantity of fluid used is of secondary importance. After all, the chief objections to this method of treatment are the delay incident to its use, and the impossibility of knowing whether or not the intussusception has been completely reduced. He is of the opinion that early operation will greatly reduce the death-rate in this affection. In endeavoring to reduce the obstruction, it is safer to compress the sheath at a point a little above the intussusceptum, in addition to making traction. Intestinal anastomosis, total resection and the making of an

artificial anus are all procedures associated with a very high mortality, though Kocher recently reported five successful cases of total resection.

DR. CHARLES L. GIBSON gave the results of a study of 187 cases of acute intussusception reported since 1888, and maintained that the prognosis depends absolutely on the promptness of surgical relief. By means of various tabulations, he endeavored to show that the earlier laparotomy is performed, the larger the percentage of reducible and uncomplicated cases, and the better the prognosis.

DR. FREDERICK HOLME WIGGIN said that having become impressed with the idea that the manipulations associated with the injection method of treating intussusception were productive of more shock than laparotomy, he proceeded to collect a series of cases for study. He was then able to demonstrate that the enema treatment was actually followed by a higher death-rate than early laparotomy done by experienced surgeons. He believes that surgeons generally are coming to accept this view, though medical men still seem to be wedded to the old injection treatment. The time is not far distant when the whole profession will consider this same injection treatment just as unsuitable for cases of intussusception as they now do for the relief of a strangulated hernia.

DR. WILLY MEYER took the same position as the last speaker, and pointed out the weak points in the injection treatment, viz.: 1, the large percentage of cases of the ileocecal variety, or those not amenable to this treatment, and 2, the danger and unreliability of this method.

DR. A. JACOBI took a very decided stand against operating at once in all cases of acute intussusception. The child should be supported by a pillow, with the hips elevated, and the fluid should be injected by means of a fountain syringe elevated not more than twelve or eighteen inches above the anus. If this is done under chloroform anesthesia, and the abdomen manipulated gently, no harm can result, and many patients will recover without operation. He advises that this method be tried in the early stages of every case of acute intussusception, being repeated two or three times, if need be, at an interval of one or two hours. If still unsuccessful, laparotomy should be done at once.

DR. CHARLES G. KERLEY said that as mistakes in the diagnosis of intussusception in young children are quite common, he desired to emphasize that if there are bloody stools associated with slight fever and with a prostration greatly out of proportion to the other symptoms, the physician is justified in strongly suspecting the presence of an intussusception. The speaker thoroughly agreed with Dr. Jacobi regarding the value of the enema treatment, and reported two cases which he had successfully treated in this manner.

DR. ARTHUR L. FISK related a case in which, by enemata, he had apparently succeeded in reducing the tumor on two occasions, a few hours apart, nevertheless the child had suddenly passed into collapse the following morning, and had begun to vomit stercoraceous matter. Laparatomy was then performed, and showed that what he had reduced was the portion in the colon, leaving a portion in the ileum unreduced. This only served to strengthen his belief that in intussusception of the ileocecal variety enemas serve rather to close the ileocecal valve more tightly.

Chicago Ophthalmological and Otological Society.

Dec. 12, 1899.

PRIMARY TUBERCULOSIS OF THE CONJUNCTIVA.

DR. F. C. HOTZ presented this case—a child 5 years old, with an unusual affection of the conjunctiva, which he diagnosed as primary tuberculosis. Both the father and the mother are living and in good health. No tubercular history, nor specific history was obtainable. The child had scarlet fever when 3 years of age, and had diphtheria in May. About seven weeks ago the mother noticed in the lower right quadrant of the right eye a slight injection of the bulbar conjunctiva, which gradually increased until the entire bulbar conjunctiva was involved. Six weeks ago, a week after the beginning of the trouble, there was first noticed a swelling of the pre-auricular gland, and later the glands at the angle of the jaw on the side corresponding to that of the affected eye became swollen. The child entered the hospital about ten days ago. When seen, the whole right side of the face was considerably swollen, the swelling due chiefly to an enlargement of the submaxillary glands and pre-auricular gland. The lids showed slight edema, and on everting the lower one, the conjunctiva looked granular and deep red. The ocular conjunctiva was swollen all around the cornea, particularly the lower right quadrant, which showed decided elevation, due to dense lardaceous infiltration, and on the top of this elevation there was an irregular yellowish patch, evidently due to ulceration, with a rough surface, as if little holes had been pricked into it. Upward and downward, following the margin of the cornea, and at a little distance from it, was noticed a number of yellow punctiform infiltrates; there was also some mucous secretion. Since the child has been in the hospital, the swelling of the cheek has decreased materially, and the enlargement of the submaxillary glands has decreased so much that now only small nodules are felt. The pre-auricular gland, first noticeable by its enlargement, has also been reduced in size to a great extent. The condition of the ocular conjunctiva has not changed materially. From this clinical picture of the affection the Doctor made the diagnosis of tuberculosis of the conjunctiva and, in order to confirm it, a bacteriologic examination has been made on several occasions; and in three tests the tubercle bacillus has been found. Cultures have also been made from the scrapings, which have not yet developed far enough to furnish any information.

The treatment so far has consisted simply in boric acid irrigations every morning and evening, and in the application of iodoform powder upon the conjunctival ulcer. It occurred to Dr. H. that it might possibly be of advantage in such a case where the tubercular affection is still localized, only beginning to extend, as shown by the lymphatic disturbance, to subject this patient to the tubercular treatment. He therefore inquired whether it would be a proper procedure, believing it had never been used in such cases. So far these cases have been treated by curettement of the ulcers, or by cauterization with or without the curettement; also iodoform has been used. The danger is the extension of the general infection. The case is of interest, as the affection is not very common, this being the first typical case that has come under his observation.

SCLERO-KERATITIS.

DR. H. W. WOODRUFF, Joliet, Ill., showed a case of sclero-keratitis in a woman of 29 years, who had hip-joint disease when 2 or 3 years old. Since that time her general health has always been good, with the exception of some rheumatic pains in the joints. A sister had hip-joint disease at 11 years. She has two brothers and two other sisters, all in good health. Her father died at the age of 68, of Bright's disease, and her mother died of typhoid fever at 48.

One year ago last October a slight inflammation began in the right eye, gradually getting worse, until last December, since which time frequent relapses have occurred, the longest period of rest being five weeks. There is general diffuse congestion of the sclera, more marked about the ciliary zone, with irregular triangular deposits in the cornea, with base in the sclera and apex toward the center of the cornea; no scleral nodules. The magnifying glass showed the cornea to be quite vascular, some blood-vessels extending beyond its center. This was the condition of the eye September 1, when he began treating her, and it is the same now. She has been treated with potassium iodid in small and large doses, salicylates, salines, diet, etc.; locally with atropin and hot applications. Atropin had to be discontinued at one time on account of its poisoning, when atropin ointment was substituted. There is only a slight adhesion of the iris to the lens. Pain is not very severe, and is controlled by hot applications. The affection in this case was probably due to rheumatism, although there is no definite rheumatic trouble, simply a history of having pains. There is no tubercular history excepting the existence of hip-joint disease during childhood. This has not disturbed her since childhood.

RETINITIS PIGMENTOSA.

DR. ALBERT B. HALE presented this case. The patient, a Russian, 23 years of age, has been in this country only two months. He says that about twelve years ago he had a severe illness which lasted a long time, but he does not know what

was. He had his eyes examined by an eye doctor in Warsaw, who at the time could not tell what was the matter. He is a painter by trade, an unusual trade for a man with his visual defect, and of late he has been obliged to give up his job because he could not see enough of the object he was painting. His associates had to help him out a great deal. He came to Dr. H. as a private patient, saying that he became so blind at night that he could not go about. So far as reading and writing are concerned, he gets along very well without any noticeable trouble. Vision is one-tenth in each eye, but on giving him time, from half a minute to a minute and a half, he can see perceptibly better. There is astigmatism in each eye, which has never been corrected, and slight manifest hyperopia. He accepts a minus cylinder which improves his vision, if he is given time, to about 6/24, which was the best Dr. H. could get in the left eye, better than in the right, although the field of vision in the left was more restricted than that of the right. Dr. H. showed charts of it, and said he got good reading that morning with the perimeter, and the illustrations show the field he has remaining in the left and right eyes. The central spot of visual perception is perfect. Outside of this he is blind to all colors. There is no difference in the reduced perception for red, blue or green in the small area just outside the clear central vision, while within this clear area he perceives everything. The large area outside of the central fixation point is completely obscured; it is the same way in the left eye. The pigment spots are very, very plain and typically arranged. They do not, however, encroach on the macula or on the papilla. The latter is the least bit pale, and the retinal vessels are drawn out to the usual hair-like condition which one sees in such a case of retinitis. The pigmentation does not extend to the periphery, so far as he can trace it. We have one area the diameter of the ordinary disc which is heavily pigmented. Beyond that, up toward the equator of the globe, the retina and choroid are comparatively free from pigmentation. The fundus appearance is typical and beautiful.

SYMBLEPHARON WITH CORNEA ADHERENT TO PALPEBRAL CONJUNCTIVA.

DR. THOMAS A. WOODRUFF presented the following case for Dr. Casey A. Wood:

Joseph M., 12 years of age, while shooting off a cannon last Fourth of July, exploded a can of powder and the flame burst into his face, severely burning the left eye. There was a large upper symblepharon on the left eye, about seven-eighths of the cornea being adherent to the palpebral conjunctiva, with granulation tissue at the points of union externally, altogether involving an adherence of one-half of the whole upper palpebral surface with the eyeball. After treatment of the swollen lid and granular conjunctiva for three weeks, the palpebral conjunctiva was dissected free and the lower border stitched to the sulcus above. Contrary to expectations, there was no readhesion, and the patient's vision has improved, and the eye is clearing up, and now, one month after the operation, improvement is marked. The question arises, what further operation may be done, if any? Also, whether a Thiersch graft or a mucous membrane transplantation would be preferable?

DR. F. C. HOTZ—I do not quite understand the procedure adopted by Dr. Wood in this case. I believe it was stated that after dissecting the lid from the globe the palpebral conjunctiva was drawn from the cul-de-sac forward to cover the lid. I do not understand where this conjunctival flap came from; for it would seem to me the dissection produced two raw surfaces extending from the lid borders and the cornea respectively, all the way back to the fornix, and there was no palpebral conjunctiva left to draw forward. The result is certainly very good, as it has liberated the lid from the cornea, and given the eye good lateral motion. The lid shows a certain degree of ptosis. When you turn the lid, you will notice that its upper border is in close adhesion with the eyeball near the corneal margin, and unless it is dissected back freely and the defect covered with a graft on the eyeball, it will be impossible to open the eye freely, and in the future, if the patient has any annoyance from this close connection between the upper lid and the eyeball, I should consider it perfectly proper to perform a second operation in that direction to dissect the lid farther back and cover the wound on the eyeball with a lip graft.

(To be continued.)

Chicago Academy of Medicine.

Nov. 10, 1899.

(Continued from p. 110.)

CRETINISM AND THYROID TREATMENT, WITH REPORT OF A CASE.

DR. FRANK X. WALLS presented this topic, in part saying: The thyroid gland in cretinism is frequently entirely wanting; or it may be rudimentary, or even very much enlarged through goitrous degeneration. In very rare instances the gland has been apparently normal, but even in these cases its functional activity has been arrested.

The disease is rarely congenital; in the greater number of cases it develops from the fifth to the eighth month, sometimes later, even up to the time of puberty. After this period, perversion, diminution or abolishment of the functional activity of the thyroid gland leads to myxedema rather than cretinism.

Complete and interesting papers on cretinism may be found in Osler's article in the supplement to "Keating's Encyclopedia of the Diseases of Children;" Murray's treatise in the Twentieth Century; or Ewald's monograph in Nothnagel's System, and I wish to acknowledge my indebtedness to these works for much that appears in this paper.

In this connection it may not be inappropriate to briefly review the theories of the function of the thyroid gland. Formerly it was believed that the only purpose of this gland was to give a beautiful contour to the neck; to express by swelling or condensing, strong emotions; and perhaps also to afford protection to the deeper organs. Later it was thought to exercise a controlling or regulating influence on the amount of blood going to the brain, because of the proximity of the gland to the large blood-vessels in the neck, and the rich cavernous spaces in the gland; and for long years an intimate relationship between the gland and the sexual apparatus was recognized. Today it is universally acknowledged that the thyroid gland represents an organ indispensably necessary to the preservation of life, and there are two views concerning the manner in which the thyroid exercises its influence on the economy.

The views, in brief, ascribe to the thyroid an internal secretion that possesses either a nutritive or an antitoxic function; that is, that under the phenomenon of athyrosis there is withheld from the organism either a material necessary for its nurture, or a substance having an antitoxic action against certain products of tissue metabolism. The great majority of authors assign to the gland an antitoxic function, which in a direct or indirect manner antagonizes certain poisons of tissue metabolism, that, accumulating in the blood, injuriously affect the general organism and in particular the central nervous system. The gland might accomplish this result in two ways; the poison in the blood is destroyed while circulating through the gland; or the gland secretes an antitoxin that is taken into the circulation and exerts its influence after it has been incorporated into the general vascular system.

Against the first of these hypotheses and in favor of the second, speaks the structure of the gland, which is that of a secreting, rather than filtering, organ, and also the fact that the gland juice, or the gland itself, when introduced into the economy, after the removal of the thyroid gland, prevents the development of the otherwise inevitable symptoms of systemic intoxication. We may consider, then, that the gland produces a substance which is taken into the blood, and in the blood exerts an antitoxic effect on certain toxic products of tissue change.

This thyroid substance, if introduced into the blood in too great quantity, either naturally, through increased functional activity of the gland, hyperthyrosis, or artificially through administration of too great a quantity of gland substance, leads to symptoms of cardiovascular and nervous irritability comprehended under the term "thyroidismus." It may be of interest to recall that clinically cases are met with that for years present the symptoms of Basedow's disease, hyperthyrosis and then gradually pass into a condition of myxedema, hypothyrosis; or, in other words, cases in which an increased functional activity of the thyroid gland exhausts the secreting capabilities and is succeeded by a lessening or total abolishment of function.

The diagnosis of typical cretinism does not present any serious difficulties; on the contrary, after having once seen a case

or studied a photograph, the recognition should be easy. Unfortunately, however, many cases are permitted to go for months or even years without specific treatment. A case I saw in London was sent, unrecognized by an urban practitioner, to the Ormond Street Hospital, for the removal of adenoids. The only conditions that might possibly be confounded with typical cretinism are dwarfism and the Mongolian type of idiocy. The dwarfs are frequently bright and intelligent and lack the pachydermic cachexia, and the Mongolian idiot, while it may resemble the cretin in appearance, does not have the myxedematous infiltration of the skin.

A child who presents a dwarfish frame, with undeveloped intellect and cretinoid facies, as depicted in the first photograph, and all cretins resemble each other almost exactly, and he who has boggy infiltration of the skin, is without doubt a cretin.

We can readily conceive of conditions of the thyroid gland in which its function may be impaired to a slight extent, to a greater degree, up to absolute abrogation of function; we can conceive of clinical cases that may present every gradation from the normal type to cretinism.

Cases that are suffering from a lessened but not abolished

functional activity of the thyroid gland may present diagnostic solution. These cases have been called by French writers *myxedema fruste*, and at times correspond to the symptomatic syndrome known as infantilism, and are discussed in the works previously referred to.

The treatment of cretinism consists in the administration of thyroid gland.

The intra-abdominal and subcutaneous implantation of sheep's thyroid has been attempted, but with no considerable measure of success. The subcutaneous injection of the extract of the thyroid gland was introduced by Murray in 1891, and soon after he suggested the feeding of the afflicted individuals with the glands either fresh or desiccated, and this latter method of administering thyroid is the most convenient and satisfactory that has been prepared.

The dosage of thyroid gland must be individually established in each case. The usual initial dose for a child is 5 gr. a day, increased to 10 or 15 gr., and continued until the cretinoid symptoms have disappeared. The treatment thereafter is to be continued, with perhaps a smaller dose, during the lifetime of the individual, else a return to cretinoid or myxedematous condition is inevitable.

In December of last year a cretin baby was brought to the Children's Clinic at Northwestern University, who since [illegible] time has been under observation and treatment, and shows [illegible] a marked improvement as might justify the publication of [illegible] history and the presentation of two pictures.

E. W., aged 16 months, was carried to the clinic by [illegible] mother because of a dry and harsh condition of her scalp, [illegible] scant growth of hair. The family history was entirely negati[illegible] The father and mother were young, healthy adults, with no e[illegible] dence of diathetic or specific disorder, and not consanguine[illegible] The child was the production of a difficult labor lasting [illegible] teen hours, and the mother, a primipara, was delivered un[illegible] chloroform.

The child was nursed by its mother until it was 1 year [illegible] and then given soft foods, oatmeal, crackers, potatoes, [illegible] After 3 months of age, the child did not seem to grow, thou[illegible] it had a very good appetite and slept quite soundly. When [illegible] months old its hair began to fall out, and its scalp became [illegible] and scaly. Later the skin about the knees and shoulders [illegible] came dry and harsh.

At present the child does not walk nor talk, is intellectua[illegible] dull, good natured, sleeps almost continually, eats well, but [illegible] obstinately constipated.

Status praesens.—The face presents the physiognomi[illegible] characteristics of idiocy. The complexion is of a sall[illegible] whitish cast. The scalp is dry and scaly, the hair stiff [illegible] sparse and of irregular length. The anterior fontanelle is wi[illegible] ly open, diameter 2 inches, and the posterior fontanelle is [illegible] yet closed. The forehead is low. The nose is small and [illegible] troussé, with large nasal orifices. The base of the nose [illegible] sunken and flattened, and the interocular space is very wi[illegible] The eyes are set far apart and seem to be quite small because [illegible] the thickened eyelids that almost close the palpebral fissur[illegible] The lips are thick, and puffed, and between them is protrud[illegible] the large swollen dusky tongue. The gums are soft and sh[illegible] no signs of the eruption of the teeth. The neck is short a[illegible]

k, and the head hangs forward with the chin resting on the num.

The skin of the face and body is extremely dry and hangs olds: it is quite thick, but yields no pitting on pressure. the root of the neck on each side is a fatty-like tumor. The t is short, the abdomen large, protruding and flabby, with eudohernia at the umbilicus. The arms and legs are thick squat. The body length measures 22 inches. Such, in f. are the notes of the case taken in December, 1898, at the the first picture was taken.

The child was given tablets of the extract of the thyroid id (Parke, Davis & Co.). At first 1 gr. of the extract was en three times daily, which is the dose the child is now tak-

The second photograph was taken in October, 1899, and change from a dwarfish, idiotic, repulsive thing to a bright, ty, intelligent child is as remarkable as it is satisfactory. he child, as the illustration shows, has lost all of the ear- ks of cretinism. The fontanelles are closed, she has an ndant growth of hair, a good complexion, and soft, pliant ; she walks, and talks in words of one syllable, has twelve h and measures 30 inches in height, a gain of eight inches en months.

retinism is a chronic disease due to a cessation of function total absence of the thyroid gland, and is characterized by a wth-disturbance of the bony skeleton and the external soft ts, with a characteristic change in the physiognomy and re disturbance of the sense organs and the intellect.

R. JAMES G. KIERNAN—Dr. Walls quoted Osler as saying t there was not much of an underlying local factor found he United States as compared with other countries in re- d to cretins. Dr. Osler is evidently unacquainted with the lts published in 1887, by the American Medico-Psycholog- Association, superintendents of various insane hospitals, by a number of physicians connected with the Indian res- ation. It would seem from the results that there was a tinuous causal factor in connection with these American es. The record of cretinism in English-speaking countries ollowing the same path that that of many other diseases . It is just being brought to the attention and found to rare. Then the general practitioner trains his powers of ervation and finds a lot of cases. Progress in connection h cretinism in this direction has been unusually rapid since leniably brilliant results have followed the thyroid treat- nt of the condition. There is very little doubt that there l be a large number of cases found from time to time, of erfect cretinism due to a variety of conditions, occurring a number of different cities and rural districts, but prac- lly the same as those which obtain in Italy, Switzerland,

BACTERIA AND ICE.

DR. ADOLPH GEHRMANN—In considering this subject from anitary standpoint, we have practically the same conditions deal with as in the consideration of water: the chemical ity of the ice, then the bacteria that may cause disease. e chemical quality has to do with the purity of the water m which the ice is prepared. We can say that ice, as pre- ted for use, both artificial and natural, contains bacteria greater or less numbers, ranging from fifty up to three usand per c.c.

As to contamination, the point in relation to typhoid fever of great importance, and the bacillus coli communis is the ication of the presence of pathogenic bacteria. The methods examination are those which are used in water analyses the determination of the bacillus coli communis, and it is en as an indication for contamination. We may also at- pt to determine the presence or absence of the typhoid illus itself. Among the points of sanitary interest is the rce of the ice-supply; this should be examined. As a rule, is procured from a definite locality, and the water in that ality can be examined before the ice crop is gathered. Then. en the ice is cut, it is stored in large quantities and re- ins there ready to be hauled away for use. It can be sub- ted to examination from time to time until it is to be used, that its quality can be determined a long time before its livery to the consumer.

When ice is found to be impure, according to the city ordinances, its distribution is limited to certain places, based on inspection of the conditions surrounding that particular place. There are two sources of contamination of ice: original contamination from the place where the water is obtained, as natural ice, while ice may be contaminated during its transportation by railroad companies. Ice is never considered as a food. It is classed along with manure, grain, feed, lime, and all merchandise materials, and handled practically in the same way. A series of experiments conducted by Mr. Kinnicott, formerly city chemist, in ice which was packed with various other materials, showed that it became contaminated so that a considerable number of bacteria were found in the cakes. Considerable contamination may result in this way. (Here Dr. Gehrmann related at length a case of infection from ice, resulting in several cases of typhoid fever.)

There is one point I might speak of in regard to disease bacteria in ice and the storage of ice, i. e., water in a pond or river will purify itself to a greater or less extent, but when water is frozen immediate preservation takes place. One of my early experiences with ice was in relation to a pond in the neighborhood of the city, from which the quality of water was doubted. Investigation during the summer time showed that arrangements had been made to fill the pond with water from Lake Michigan during the fall. The pond had been filled before the previous winter season, with Lake Michigan water, raising it to a level of some three or four feet. An ice crop had been cut and stored, and a portion of it was being delivered during that summer. This was during the first year that the city undertook the work of inspection. Analyses of the ice from this pond were made and condemned it for domestic use. The bacillus coli communis was found in the ice, and a considerable amount of organic matter of vegetable or animal origin. An examination of the water in the pond showed the absence of the bacillus coli communis, and the water contained a relatively less amount of organic matter. The point we had to deal with here was that the water in the fall had been contaminated lake water, frozen and preserved in the ice-house, while the pond, without the further addition of lake water, purified itself to such an extent that disease bacteria had disappeared. It was further found, in this connection, that when Lake Michigan water was not pumped into the pond, a reasonably pure crop of ice could be obtained from that source.

REPORT OF A CASE OF CESAREAN SECTION.

DR. CHARLES E. PADDOCK reported the following case: May 22, 1898, I was called by Dr. Van Pelt to see a case in labor. Examination showed the pelvis filled with a mass which very much resembled a child's head, and under certain conditions might easily be mistaken for it. Labor had progressed about twelve hours, the membranes having been ruptured for several hours. The cervix was found, with great difficulty, crowded up behind the pubis. The patient was a primipara, American, about 28 years of age, strong and healthy. She had never been aware of any tumor. She was removed to the Mercy Hospital, and there being no alternative, a Cesarean section was decided on. Under anesthesia, a hard mass, evidently a myoma, near the cervix, completely blocked the outlet. The four fingers could be passed into the cervical canal with great difficulty, making the canal about 2 cm. by 7 cm. This diameter positively decided the Cesarean section. Even had the child been dead, craniotomy would have been out of the question.

Dr. Halstead and Dr. Barnes assisting me, the patient was soon delivered, through the abdomen, of a ten-pound boy. I should judge the time from the commencement of labor to the delivery was twenty hours. The operation was the conservative Cesarean section, not removing the tumor.

The question may well be asked, Why was the Porro-Cesarean not done? Kelly (Operative Gynecology, page 423) says: "When there is good reason to anticipate sepsis; when, for example, the patient is exhausted by a protracted labor, and when manual or instrumental efforts at delivery have been made, etc., the Porro operation must be performed." In this case, the woman was considerably exhausted, and from the too frequent examinations and early ruptures of the membranes, sepsis was possible, still we decided to leave the uterus and tumor. The exhausted condition of the patient, and my experience in obstetrics, of seeing similar tumors grow during

pregnancy, and subsequently diminish, and sometimes entirely disappear, led me to this conclusion. That I was partly correct is evident from the specimen which I show you.

The patient made a hasty recovery. A small stitch abscess was the only complication. Most authors speak of the lochia following a Cesarean section as being the same as delivery *per via naturales*. In this case the flow stopped the third day. If one stops to consider what happens, it is plain that the flow can not be the same. The child in passing down through the lower uterine segment and vagina in normal cases denudes the surface, so that we have a continual wound surface, which we do not have when the child is removed through the abdomen. I claim that most of the lochia, or a good part of it, comes from this denuded area and not from the placental site. I merely mention this as something that is liable to occur, and I believe does occur in cases of this kind, and that the absence of the usual flow may not worry the physician.

I saw the patient occasionally after leaving the hospital. The tumor gradually diminished in size, and six months after delivery it was hardly to be felt. Eight months subsequent to delivery the tumor had commenced to grow, and I advised an operation, and through the kindness of Dr. Franklin H. Martin, who removed the specimen, I am permitted to show it. It is a submucous myoma with pedicle attached at the junction of the cervix with the body of the uterus.

Just a few words regarding the Cesarean operation. It has generally been the custom to operate in selected cases when labor has commenced. The reason for this was the belief that the uterus would not contract. This is far from the fact, and I would strongly advise in such cases to set your time as near the termination of pregnancy as possible, have everything ready, and suit your own convenience; waiting until labor begins is dangerous. Your patient is not prepared for such a serious operation; the physician is away at another case; the membranes rupture, the cord may prolapse, and numerous complications may result. In selected cases or others, where infection of the uterus has not been possible, the uterus may be opened *in situ;* the abdominal incision in such a case does not need to extend more than a few inches above the umbilicus, or perhaps 20 cm. in all. In my case, however, where there was reason to anticipate sepsis, the incision extended high enough, so that the uterus could be lifted out on the abdominal wall, and sterilized towels packed firmly underneath to protect the intestines. An assistant firmly presses the abdominal walls against the uterus. The uterine incision is made as nearly in the median line as possible; still, if it is necessary to go to either side to avoid cutting over the placenta, you should do so. The placenta can be located by the doughy feel, by the elevation over it, and also by the increased vascularity over the site.

Great care should be given to the removal of the placenta. The contraction following the removal of the child is so great that the placenta may immediately become wholly detached. Grasping its fetal surface and raising, and at the same time twisting it, will readily detach the placenta together with the membranes. Any large pieces adhering must be removed. Small decidual shreds had better be left than to spend much time in removing them.

The uterine incision should run down to the reflection of the vesical peritoneum, which is easily recognized by a transverse white line in the cervical region. I can see no advantage in the incision advocated by Fritsch, of Bonn, namely, making a transverse incision through the fundus. In fact, to me it would have its disadvantages. After the incision has been made, care should be taken that it is long enough. It should be too long rather than too short; bringing the child out through a too narrow incision would not only cause delay, which is dangerous to the child, but might easily cause a severe rupture of the uterus. The child should be grasped by the feet, and only by the feet. Any other way, such as the arm, is awkward, can not be delivered as quickly, nor through such a small incision.

Another point worth remembering is to clamp the cord. I always do this in my normal cases, always having my forceps handy, and as soon as I am ready to sever the child, I clamp the cord in two places and cut between. This often saves time, and time is a very important item in many obstetric cases. Especially is it so in a Cesarean operation. Two valuable assistants are necessary in an operation of this kind; one assistant can entirely control the hemorrhage by grasping the uterus well down toward the cervix, and especially pressing the uterine arteries, which are readily found. Never use a rubber ligature around the cervix, as it is a dangerous procedure. It only favors atony, one of the things we wish to avoid, but it bruises the tissues to an alarming extent. No hemostatic forceps are necessary in this operation, after making your abdominal incision.

As to sutures, fine silk is probably as good as anything. Dissecting back the peritoneal covering for a short distance, pass the needle, avoiding the outer covering, emerging in the line of incision between the muscularis and the decidual layer; enter the other side directly opposite, coming out on the surface opposite the first; tie each ligature separately, controlling the hemorrhage. These sutures should be 1 cm. apart. A second row of sutures uniting the peritoneal layer and covering in the first sutures, completes the closing of the uterus.

The omentum should be spread carefully over the intestines, but not over the uterus. As a rule, adhesions form between the uterus and abdominal wall. Any infection in the uterine wound might find its exit through the abdominal wound. With the omentum over the uterus and adherent to it, the result would be different.

Too little attention is given to the after-treatment of these cases. There certainly is not the danger of infection per vaginam that there is no wound surface, but still, thorough cleanliness and the application of antiseptic pads over the vulvar orifice are obligatory. In a subsequent article, I intend to treat of this subject more especially relating to the indications for the conservative Cesarean operation and the Porro operation.

The opportunity to do a Cesarean operation is rare, but in skilled hands the mortality should not be any greater than any simple operation requiring an anesthetic. This being so, the idea of a craniotomy on a living child, in a healthy mother, can not be considered for one minute.

Chicago Medical Society.

Jan. 10, 1900.

EXOPHTHALMIC GOITER, TRACHEAL STENOSIS, ETC.

DR. A. C. KLEBS presented a patient with exophthalmic goiter with tracheal stenosis and recurrent paralysis. The patient was a man, 22 years of age, in whom, of the three cardinal symptoms of Graves' disease, only the struma was well defined. The pulse ranged from 92 to 102. Exophthalmus was not very marked. The signs of Stellwag, von Graefe and Moebius were absent. There was a slight tremor of the hands, and inclination to perspiration, palpitation, nervous irritability and headaches. The struma was rather hard and pressed on the trachea, which was bulged in. There was paralysis of the left posticus, hence difficulty in respiration—stridor—and phonation. There was no distinct improvement after five weeks rest. Iodids and faradism had been resorted to without much benefit. The author believes that in this case partial extirpation of the struma is indicated.

DR. ARTHUR D. BEVAN said he was interested in the case from the standpoint of operation. He was not clear in his own mind as to whether this case should be classed among the cases of exophthalmic goiter or not. When he saw the patient, in consultation with Dr. Klebs, he recommended expectant and iodid treatment for a time at least. If, however, the patient did not improve, operation was justified. The expectant and medical treatment of exophthalmic goiter had not been satisfactory, if the statements of recognized authorities in internal medicine were accepted. In investigating the results of surgical operations on this disease, he had found some 230 operations had been done, partial strumectomies, with a cure in 45 per cent. of the cases, decided improvement in 23 per cent., some improvement in 11 per cent., failure in but 10 per cent., and a mortality of about 7.5 per cent. Surgery in this disease holds

either a cure or improvement in eight out of ten cases. The majority of operations have been done on the theory that the disease is due to a hyperaction of the gland, the chemical theory, and the operations performed have been either partial thyreomectomies or else ligation of the thyroid vessels. A few operations have been done on the nerve theory—sympathetic—looking to the excision of the disease. Results of operations on the sympathetic—cervical—have not been very encouraging. The best that can be hoped for is the removal of one of the symptoms of the goiter, and that is exophthalmus. Tachycardia, struma and tremor were not affected by the operation. Personally, he has operated on three cases, one of which was reported three years ago. Since that time he has operated on two others, one eighteen months, another three months ago, and so far as the disappearance of the symptoms is concerned, the results have been entirely satisfactory. Given a case of exophthalmic goiter, the diagnosis of which has been thoroughly established, the treatment should be that of expectancy and the usual therapeutic measures employed. If the case did not improve, he believed it was the surgeon's duty to give the patient the benefit of the relief which surgery offers.

DR. A. J. OCHSNER operated on his first case of exophthalmic goiter some five years ago, when his attention was directed to operative intervention in this disease. The patient was a woman, 18 years of age, with a pulse of 140, and all of the other symptoms strongly marked. He removed one lobe of the thyroid, and before the patient left the hospital her pulse came down to 70, and has remained approximately at that point during the past five years. Since that time he has operated on six others, all having done well. One of them, however, was too recent to speak of the permanency of the result.

DR. ARCHIBALD CHURCH said he was interested in the case from the standpoint of diagnosis. The three cardinal symptoms of the older writers—exophthalmus, thyroid enlargement, and tachycardia—were represented only by the thyroid enlargement and a slight rapidity of the pulse in this case. There were other symptoms, in his opinion, which are as important as the classic triad referred to—namely, mental irritability, general muscular weakness, and tremor, or Marie's sign. Of the latter three symptoms, only the tremor was present, so far as he could determine, and even this from a superficial examination did not seem to be the persistent, rhythmic thrill which is ordinarily found in cases of exophthalmic goiter of long duration. Then, too, the enlarged thyroid gland was so common to many other disorders that this symptom of itself carried very little weight in the diagnosis of Graves' disease. If in addition there were in this case flashings, sweatings, attacks of colic and diarrhea, albuminuria, glycosuria, or polyuria at some period, with a tendency to mental vagaries, some one or all of these, as subsidiary symptoms, taken with the thyroid enlargement, might serve to establish a diagnosis of exophthalmic goiter.

Speaking of the surgical treatment, Dr. Church said a word of warning should be injected, as such capable men as Horsley, Kocher and others who had done a large amount of work on the thyroid, experimentally and on human beings, had reported cases of sudden death following operative procedures, and instances of the same character had occurred in Chicago.

DR. JUNIUS C. HOAG had seen several cases that had baffled the most expert diagnosticians. He recalled one in particular in which the only prominent symptom manifested was tachycardia. There was a slight thyroid enlargement. The patient had consulted half a dozen neurologists, and "internalists," and some of the diagnoses made were "neurasthenia, hysteria," etc. Finally, he discovered a slight protrusion of one eye, and then the diagnosis of exophthalmic goiter occurred to him for the first time, which was subsequently confirmed by others. The medical treatment of the disease is extremely unsatisfactory, and the profession looks to the surgeons for help.

DR. KLEBS, in closing the discussion, and replying to Dr. Church, said that in his paper he mentioned nervous irritability, frequent headaches, perspiration, family stigmata, etc. He believes an operation would probably be the best thing to recommend in this case, and was glad that the surgeons who had spoken concurred with him in that particular.

GUNSHOT WOUND OF THE ABDOMEN.

DR. JACOB FRANK reported a case of this. The patient, Mrs. A., mulatto, was 23 years of age. She was accidentally shot with a 38-caliber revolver about 1:30 p.m., and was brought to the hospital four and a half hours later. The bullet entered the abdomen in the left hypochondriac region, two inches below the last rib on the left axillary line. No wound of exit was found. She complained of slight pain, referred to the point of entrance of the ball in the region of the kidney and about the uterus. As the woman was menstruating at the time, she thought the pain about the uterus was due to it, but as the bullet was found in the cul-de-sac of Douglas, the increase of pain was well accounted for there. From the position in which the bullet left the pistol, and from its entry, it was determined that it would be almost impossible for the ball to travel in that direction without injuring the intestine. The patient was anesthetized, the bullet wound enlarged, and the finger introduced with the hope that the track of the bullet might be followed. Failing to detect the ball, an incision, six inches long, was made to the left of the median line on the outer border of the rectus muscle, beginning 1½ inches above the umbilicus and extending downward and inward toward the mons veneris. On opening the abdomen, a small quantity of fluid and some blood were found, but no escape of intestinal contents. The patient was eviscerated, the parts being protected by warm towels, from the pylorus, noting the injuries to the intestines and marking them with a piece of gauze pushed through the mesentery. Examination showed the bullet, after penetrating the walls of the abdomen and perforating the walls of the small intestine, besides bruising two or three other portions, had dropped in the cul-de-sac of Douglas, whence it was extracted. A small bleeding point was found a short distance away. As it was impossible to repair the perforating wound with sutures in the gut, a resection was made and a 1¼ inch Frank's coupler introduced and the anastomosis completed in the usual way. The bruised portions were closed with Lembert sutures. A gauze drain was inserted in the bullet wound incision. At the upper end of the laparotomy incision a gauze drain was introduced, and at the lower end a modified Mikulicz drain into the cul-de-sac, and removed after thirty-six hours. The patient made an uneventful recovery.

DR. FREDERICK LEUSMAN showed a young man with a chronic posterior urethritis of ten years' standing.

DR. D. N. EISENDRATH showed, first, a case of congenital nevus, involving all of the fingers of the right hand of a child 5 years of age.

GANGRENE OF FOOT.

The next case was one of gangrene of the foot following a Schede operation for the relief of varicose veins combined with ligation of the internal saphenous vein. The patient was not shown to throw discredit on an operation which has given most excellent results in the majority of cases, but simply to call attention to the fact that it may be, at times, followed by complete venous stasis and gangrene, and that the operation is not to be advised when there is much arteriosclerosis, as was present in this case, or when the return circulation will be at all impeded.

SURGICAL KIDNEY.

Dr. Eisendrath's third case was one of a patient who had been operated on 1½ years ago on account of a unilateral surgical kidney, with excellent recovery. The other kidney had remained apparently normal; the urine was clear; the patient had been treated with antitoxin for diphtheria since that time; and had also undergone an operation for cystic ovary. The case was chiefly interesting on account of the fact that the general teaching is that surgical kidney is most frequently bilateral, and such cases as the above show that nephrectomy for such a condition offers a good prognosis.

A specimen of surgical kidney was also shown, which had been removed from a woman at autopsy, who had suffered from a cystitis, and in which the opposite kidney was also found to be perfectly normal. Similar cases have been reported by Weir of New York.

DR. D. M. ADERHOLD reported an interesting and instructive case of amebic dysentery.

THE JOURNAL OF THE
AMERICAN MEDICAL ASSOCIATION.

SATURDAY, JANUARY 20, 1900.

DIAGNOSIS OF BUBONIC PLAGUE.

In October, last year, there convened in the Imperial Health Department at Berlin, a scientific conference for the discussion of questions relating to the plague. The wide field indicated seems to have been covered in a most exhaustive manner[1]. All the various problems, scientific and practical, of the various aspects of bubonic plague, were here discussed in a select gathering of recognized authorities. The results can not fail to be of immediate benefit to Germany and indirectly to other countries.

At this time it may be of advantage to refer to the paramount question of diagnosis, of especially the first suspected cases which may obtrude themselves at any time in seaports. Pfeiffer, recapitulating the more important observations in regard to the examination in plague, remarks that the blood does not carry the germ constantly; often but few bacilli are present; at other times they are present in large numbers, but may diminish rapidly and even disappear wholly shortly before death. Frequent cultures should be made. Bacilli grown from the blood at first develop slowly and poorly. In the pulmonary form, which is usually fatal, the bacilli are readily found in, and obtained from, the sputum. In light cases of plague the bacilli are often hard to find. The primary lesions are the most promising places while fresh. The pus of suppurating buboes is nearly always sterile. There is no theoretic objection to incision of buboes for securing material; the incision necessary is harmless, and often gives the patient relief. Great care should be exercised in the post-mortem of the first cases especially, in order to prevent the spread of the disease. The material especially necessary for diagnosis is the contents of buboes, the spleen and the lung, and the post-mortem need be carried no further than necessary to secure material for examination; often this can be obtained by punctures. Post-mortems should never be made by others than experts. Whenever possible, all examination should be made on the ground; transmission to distant places should be avoided; a special committee was appointed to draw up special regulations for the sending of material away in the event that should be unavoidable. Pfeiffer states that when the microscopic demonstration of the bacillus does not suffice, then cultures must be made, preferably on agar and blood serum, in pure infections; in mixed infections, gelatin slants kept at low temperatures are most serviceable. Inoculations should be made, especially of rats; rats infected by inoculation of the nasal mucosa should not again be touched; no animal experiments are to be made outside of the laboratory. As regards serum diagnosis, further investigations are essential before the matter can be cleared up satisfactorily.

The Prussian government has arranged and made ready for use three "flying laboratories" at a cost of about $750 each, as previously noted in THE JOURNAL. Four small boxes contain everything necessary for the examination of material of suspected cases of plague. When necessary these are to be sent on at the same time as an expert is hurried forward. In some of the quarantine stations rooms have been set aside for laboratory purposes in case of need. In this way the establishment of stationary laboratories can be dispensed with.

Of the many other problems discussed with equal thoroughness and with equally definite results, suffice it to mention that the Conference unanimously recommended the establishment of stations for the manufacture of protective vaccin material and of serum for the agglutination test, and of an institute for the preparation of antiplague serum.

The perusal of the report of the proceedings of this Conference carries with it the impression that the prescribed task has been accomplished with signal success, and that the plague, should it reach the shores of Germany, will meet a powerful and well-planned defense. The direct, practical value and application of scientific laboratory and clinical research are again demonstrated with a directness that points the value of this sort of cooperation in other problems of like nature.

[1] Centrabl. f. Bakt., Abth. i, 1899, xxvi, 719.

THE CRUSADE AGAINST TUBERCULOSIS.

There is no longer any question among those most competent to form an opinion on the subject, as to tuberculosis being a communicable, and to a great extent a preventable and curable disease. It is definitely known that only in the rarest instances is the disease as such inherited from the parent by the offspring, although a susceptibility or predisposition may be thus transmitted. Of the preventability of tuberculosis evidence will be found in the reduction in morbidity, and mortality effected wherever appropriate prophylactic measures have been instituted, apart from the knowledge that, being dependent on a palpable, tangible, finite cause, the control of this must necessarily inhibit the development of its effects. That tuberculosis is curable is established by the results of both clinical and pathologic observation, as exhibited in the large number of those restored to lives of health and usefulness, on the one hand; and to common detection of healed foci of tuberculosis in the bodies of those dead of other diseases, on the other.

A powerful impetus has been given in the last few years, to the movement directed to the prevention and the cure of tuberculosis. Medical literature teems with communications on these subjects, and at least one publication is devoted to their consideration exclusively. Congresses dealing with the various aspects of tuberculosis have been held, leagues and societies for the re-

striction of its ravages have been organized, and special hospitals and sanatoria for its treatment have been erected. The importance of the subject has always been appreciated by the medical profession, but signs are not wanting that the lay public has awakened to the gravity of the menace by which it is threatened in this great "white plague," and the vast possibilities of an intelligent, vigorous, and well-directed prophylaxis. Some interesting facts in this connection were developed at a joint meeting of the Philadelphia County Medical Society and the Pennsylvania Society for the Prevention of Tuberculosis, held recently. On this occasion the importance of educating the community in the ways of prevention was pointed out, and the need of hospitals and sanatoria for both the poor and the better circumstanced, particularly for the former, was emphasized, not less on economic than on humane grounds; not alone for the sake of the sick and the suffering, but for the protection of the well. The obligation is to be met in this way, and the interests at stake are far too enormous to be borne by individuals, and they naturally and properly devolve on the state. Questions of cost and maintenance were intelligently discussed by practical men on the basis of actual experience, and the necessity for the establishment of such institutions, not alone in the country but also in the city, and the situations best adapted for their location, were pointed out on the authority of personal observation. It was clearly shown that for the recognition and proper treatment of many obscure and otherwise inaccessible foci of disease, registration of cases of tuberculosis would be necessary.

On all sides the hopefulness of the movement stood out prominently. In the matter of hospital accommodations it was pointed out that, for the present at least, it might be best to utilize existing institutions, setting aside special wards or special buildings for cases of tuberculosis, as, in the first place, the public is not yet prepared for, and it would in many ways resent attempts at the enforcement of absolute isolation, so that such a step would tend to defeat the objects of the movement. In the second place the cost of the necessary new plants, even beginning in a modest way, would be very considerable, and the next most important item would be the cost of nursing and of treatment. It would, therefore, seem best for the present to intelligently use our present resources, permitting the process of specialization and isolation to evolve gradually, and in this way to obtain the co-operation of the people in a movement whose results must in time prove of inestimable benefit to the entire human race.

PHARMACOLOGY OF THE ORGANIC NITRATES.

Modern pharmacologic research is slowly but surely establishing itself on substantial foundations. Time was, and not in a wholly remote past, when authors of text-books of materia medica tried to analyze the pharmacodynamic actions of complex physical constituents in many drugs, such as digitalis, ergot, squills, etc. But the newer studies prosecuted in many laboratories demand a knowledge of the molecular chemical structure of the individual constituents before investigations are commenced, and the appreciation of the part played by the different chemical radicals in a complex synthetic combination, be it of digitoxin, chrysotoxin, scillain or acetanilid, is intimately bound up in the interpretation of the pharmacologic results.

No more promising field of experimental research has been opened up than the study of the effects of different radicals when added to well-known compounds, and the synthetic chemist and pharmacologist are hand and glove in their endeavors to work out new combinations of therapeutic utility. The study of the action of the various nitrates has always presented special attractions because of their great utility in the therapy of cardiac and vascular diseases; and the recent work of C. R. Marshall, professor of materia medica in the University of St. Andrews, on "The Pharmacological Action and Therapeutic Uses of the Organic Nitrates,"[1] offers some suggestions to those interested in the modern advances along the lines indicated.

He points out that two groups of these nitrate compounds may be distinguished: the *substitution* compounds, in which the nitrate group replaces a hydrogen or an hydroxyl group in the original compound; and the *addition* compounds, in which the nitrate radical is added to the original molecule, and a substance in many respects resembling an inorganic salt is produced. The experiments were made to determine the effects of the nitrate radical in organic combination in the organism and the modifications of this action produced by the various alkyl radicals. A large number of bodies were tested, the physiologic investigation being confined to the general effects and the toxicity, the action on the vascular and excretory systems, the mode of excitation and the influence of susceptibility and tolerance.

The following conclusions may be deduced from this extensive study: With the exception of the addition nitrate compounds all organic nitrates are toxic; the toxicity increasing within limits perscribed by the solubility; thus mannitol nitrate and the nitrate sugars are so insoluble as to be almost non-toxic. All are vasodilators, the power in this directioin, like the toxicity, increasing with the increase of nitrate groups.

On account of the comparative insolubility, the main effect of the solid organic nitrates is a gentle and prolonged dilatation of the blood-vessels. All produce methemoglobin when added to the blood, with the exception of methyl nitrate. The amount of methemoglobin formed is mainly dependent on the solubility of the nitrate ester. The effect on the pressure of the blood is that of primary depression, which is followed by a gradual rise in pressure; mannitol hexanitrate and glucose pentanitrate produced the most lasting depression.

From the therapeutic point of view, the deductions,

[1] Medical Chronicle, vol. 1, 1899, No. 6.

while for the most part not entirely new, yet amplify our conceptions of the action of some of the nitrates more commonly employed. Thus of nitroglycerin it is said that while it is given empirically in a great variety of disorders of the vascular system, but two groups of disease warrant its use. These are: 1, those diseases connected with actual or relative spasm of unstriped muscular fiber, and 2, nervous diseases. A third group, where its action would aid in the elimination of soluble toxins from the body, is best treated by other remedies. Glycol dinitrate possesses a similar effect to nitroglycerin, but is more rapid in action as well as more transitory, but by reason of its great expense will probably not come into general use. The solid organic nitrates, erythrol tetranitrate, mannitol hexanitrate are of service where gentle and prolonged dilatation of the blood-vessels is deemed necessary. The chief value, however, is in preventing the onset of anginal pains, for which purpose erythrol tetranitrate has proven of distinct service. Mannitol hexanitrate, by reason of its insolubility, is less serviceable. Methyl nitrate possesses no advantages over the erythrol compounds, and the sugar nitrates are too unstable for general use.

A NEW "MEDICAL JOURNAL."

A new "medical journal," that begins with the new year, is issued from a large "sanitarium" that has been unenviably noted for its quackish methods and brazen advertising. This is perhaps not in itself to be wondered at, but some surprise may be permitted at the fact that the initial number contains some advertisements from drug houses that stand well in professional regard. Can it be that the supply of drugs necessary to the conduct of this institution of unsavory reputation has been so tempting to the manufacturers that they readily yielded to the request for an advertisement of their products for this new disgrace to the name of medical journalism? In passing it may be noted that the sanitarium is "asceptic," concerning which it might perhaps in safety be remarked that one is necessarily nearly as skeptic of the morals of the institution as of the orthography of its officials. The publishers' announcement asserts: "We propose to have a Subscription of Fifty Thousand." It is not at all probable that nearly half the physicians in the United States will subscribe for the organ of an institution of this character, but it is quite in line with experience that 50,000 physicians should be made more or less unwilling recipients of this "medical journal."

STUDENTS AGAINST PROGRESS.

The students of the medical colleges of Cleveland, Ohio, or a portion of them, have organized to defeat the proposed law regulating the practice of medicine, which is supported by the profession of that state. In so doing they go beyond the Iowa students who would have only themselves exempted from a state examination, for they unselfishly (?) demand that neither they nor anyone else shall be examined, unless all present practitioners in the state shall go through the same mill. As there are legal and constitutional objections to this last, their position amounts simply to a demand that no medical reform shall succeed, and they place themselves on the level of the quacks who are fighting medical practice acts throughout the country. Making all the allowances for the average unwisdom of immature undergraduates, this is not a very pleasant matter for contemplation, and the more general the movement the worse the case. One is tempted to hope that young men who have no better ideals as to their chosen profession than to join forces with its outlaws, will never get into it, at least not until they have had the full benefit of an extra rigid state examination. Ohio would better, for its own sake, pass such a law at once, with an emergency clause attached.

ALCOHOLIC LIQUORS IN PRESCRIPTION.

The U. S. Commissioner of Internal Revenue has aided the temperance cause, it is hoped, by a recent decision. He decides that the prescription of any alcoholic liquors, uncompounded with a drug or remedy, subjects the prescriber to the special internal revenue tax as a retail liquor dealer. There are physicians whose principles or good nature have permitted them to help the thirsty to gratify their desires when the legalized public facilities are wanting. A physician in West Virginia, kept a drug store and dispensed liquors on his own prescriptions. His appeal to the revenue department from the local collector produced the decision above mentioned, and referred to in our "Medical News" columns, the 13th. The only effect of this decision will be to stop the prescribing of "straight" drinks, diluted or otherwise. It can be often enough evaded by the addition of some medicinal agent under the pretense of a prescription for disease, but if the spirit and intention of the law are strictly regarded by the authorities, this, it would seem possible, might occasionally cause some inconvenience to the complaisant prescriber. A doctor, however, who is willing to function as a stationary or perambulating "blind pig" will probably still continue his practices; the advantage of the decision is that it will call the attention of some careless individuals to the risks they run in accommodating some of their thirsty clients in dry places.

THE GENESIS OF ACUTE MILIARY TUBERCULOSIS.

According to Weigert, general miliary tuberculosis depends on a dissemination of tubercle germs in large numbers, due to an invasion in mass through a large vessel—the heart, or the thoracic duct. This theory is supported by the recent investigations of Benda[1], who carefully studied seventeen cases with this point in view. The points of invasion of the circulating blood were found by Benda as follows: Through the thoracic duct twelve times, the pulmonary veins four times, the endocardium once—once the mitral valve, and once the aortic—and the thoracic aorta once. In the majority of the cases the vascular foci contained extraordinarily numerous bacilli in heaps. The points of invasion are divisible into two classes: One, which is rare, is due to an erosion of a vessel from without of an extravascular caseous focus, the other, more frequent and present in all of Benda's cases, depends on

[1] Berlin Klin. Woch., 1899, Nos. 26, 27, 29.

single or multiple metastases on the vascular intima—a tuberculous endangitis—from which infection of the blood or lymph takes place through caseation and softening, and is followed by a general eruption of tubercles in various organs. That is to say, the general infection occurs in two stages: A few bacilli become implanted on the intima, and here produce a characteristic area in which the germs multiply freely, and then masses of bacilli are sooner or later thrown into the circulation. The primary, or intermediate, internal focus is located in the subendothelial connective tissue, and bounded externally by the inner elastic membrane. When the other coats of the vessel become involved it would be difficult, and sometimes quite impossible, to say where the lesion started, whether in the inner or the outer of the vascular tunics.

THE DIAGNOSIS OF TYPHOID.

Within the past year the bacteriologic diagnosis of typhoid has been enriched by several new methods, as noticed in the several departments of THE JOURNAL. That of Piorkowsky, by cultures from loops of the supported feces, using normal urine specially prepared with peptone and gelatin, has been confirmed by others, though as Wittich has shown, some further tests may be necessary to differentiate the colon bacillus.[1] More recently, however, Cesaris Demel has found that by using liver bouillon we can have an early means of differentiating the typhoid bacillus, and with the addition of litmus, also eleven other micro-organisms, including the colon and icteroid bacilli, and the cholera vibrio, by reactions characteristic of each[2]. With these methods, and especially the latter, we seem to have a valuable additional aid in the diagnosis of typhoid, and this with the possibility of detecting the change as early, according to Cesaris Demel, as the second day of the disease. The fact stated by Neufeld and by Curschmann[3], who confirmed Neufeld's findings, that the bacteriologic examination of tissues and blood from typhoid spots will reveal the bacillus, is also in point. It would seem probable from the recent observations of two English observers, Wright and Lamb[4], that the serum from these eruptions, while it affords cultures even earlier and more readily, will react differently from that from the general circulation in other parts of the body to the Widal test. According to their findings, the micro-organisms flourish especially in these typhoid spots, where the agglutinins found in the blood seem less active to impede their propagation and growth. Altogether our resources for the recognition of typhoid appear likely to be materially enlarged.

ENGLAND AND THE OPIUM TRADE.

The *British Medical Journal*, noticing a publication recently issued on the effects of opium as observed amongst the Chinese, criticises the opinion therein stated that the British Government is morally responsible for the opium habit in China, and that the trade is at once degrading and reprehensible. It says: "This may be all true, but it is not in accordance with the evidence laid before the recent inquiry on the opium habit conducted by a specially appointed Royal Commission." If it had said a part of the evidence, it would been more correct, for anyone who has read through the mass of published testimony must have been impressed with the fact that the official doctors and other officials and the government land farmers gave the testimony on which the findings of the commission were based, while the non-official doctors, native editors and missionaries, with a very few exceptions, testified to the direct opposite. The verdict of that commission was drawn up from the testimony of officials without regard to that from other quarters. The Burmese official testimony, moreover, was largely different from that of India, where the revenues are so largely dependent on the opium trade, and had the inquiry been extended to China, the results might have been still more strikingly different. The paragraph quoted from the publication referred to with so much disapproval, that "The day will come when the bulky report of the Commission will be looked upon as a costly and stupendous monument of sordid bias, special pleading, and outrageous discrepancy," may be chiefly offensive under the common-law rule, "the greater the truth the greater the libel." The rule of Great Britain over the inferior races has been in the main beneficial, but that is no reason why such a notable exception to the rule of righteousness as its course with the opium trade should be ignored or condoned.

COLORADO AND CONSUMPTION.

In a report submitted to a tuberculosis conference, held in Denver, Dec. 23, 1899, Dr. Tyler, secretary of the Colorado State Board of Health, gave statistics relating to deaths from consumption in Denver for the six years, 1893-98, which are worthy of consideration. While these showed only a moderate increase in the total of deaths from this cause, the percentage of cases contracted in Colorado advanced steadily from 11.26 in 1893 to 19.77 in 1898. These figures are given as indicating that pulmonary tuberculosis is increasing in that state. Quoting from the report: "This steady increase of the number of deaths from tuberculosis contracted within Colorado is sufficient to merit the earnest attention of all who are in any way interested in the prevention of the disease." The figures from this single locality are significant and suggestive, though not conclusive, but these do not seem quite as alarming as they might appear at first sight. They simply show that to keep up the average of deaths, a larger number of native cases is required, and since a large proportion of the Colorado population were originally "one lungers," it can afford an increasing proportion of presumably more or less hereditarily predisposed subjects. This is one way of looking at the facts, though it must be admitted that without a larger number of details, not here given, its absolute correctness can not be guaranteed. The population of Denver and Colorado is presumably increasing steadily, and there is hardly any better evidence to be had that the climate is salutary for tuberculous diseases than the fact that the death-rate from such does not, with the constant influx of infected individuals, very materially increase. That there is an increase of locally originating cases—admitting that they can all be posi-

[1] THE JOURNAL, xxxiii, p. 1514. [2] Ibid, January 6, p. 39.
[3] Ibid. xxxiii, p. 1652. [4] British Med. Jour., Dec. 23, 1899.

tively proven such—does not, considering the undoubtedly abundant chances for infection, materially affect the case. However we may value his text, Dr. Tyler's recommendations are correct and sensible, according to the present standards of belief in regard to the communicability of tuberculosis, and he sensibly refrains from recommending the exclusion of consumptives from the climatic advantages of Colorado.

STATE CARE OF EPILEPTICS.

Like many another great project, state provision for the epileptic moves slowly. The five states, Ohio, New York, Massachusetts, New Jersey and Texas, are the only ones that have really furnished state care for their several epileptic populations. Many other states are outlining their needs for colonies for epileptics and are urging legislative action. The colonization of these in America, the scheme apparently meeting with most success, was first agitated by Dr. Frederick Peterson of New York, in 1887. Dr. Peterson's inspiration in the matter was largely drawn from the successful Bethel Colony for Epileptics, Bielefield, Germany, where some 1500 are now grouped together on the village or colony plan. Mr. Letchworth[1] sets forth the essential principles urged by those engaged in colonizing epileptics, which is to provide an ample acreage for the prospective village, centrally located in the state, in which small homes may be built for its inhabitants and where all the industrial and educational lines may be fully carried out. As we now have a national association for the care and treatment of this class, the colonization where they may be kept under scientific study will render the society's meetings profitable to both the scientist and the philanthropist. THE JOURNAL has always been in sympathy with those endeavoring to ameliorate the unfortunate condition of the epileptic, and trusts that the time may speedily arrive when every state will provide separate institutions for its dependent epileptics.

VASOMOTOR ALBUMINURIA.

It is a fair question whether renal albuminuria can ever be considered a normal manifestation. If the answer be in the negative, the condition must be considered an indication of disease, however slight and transsient. Disease is best defined as a deviation from the normal, in function or structure, or both. In fact, there can be no abnormity in function without alteration in structure, although this may be beyond our means of recognition. Unless, therefore, albuminuria be a normal phenomenon, it can scarcely be designated "physiologic." It is fair to assume that albuminuria occurs essentially as the result of disease in the epithelium of the uriniferous tubules, and this may be due, among other things, to alterations in the vascular pressure in the kidneys, sometimes increase, sometimes diminution, and at different times fluctuations between the two. These alterations must, in the absence of gross organic disease, eventually be referred to the vasomotor system, and the condition would then fit into the group of disorders comprehended by S. Solis-Cohen in the designation, "vasomotor ataxia." Such albuminuria as is now under consideration has been observed in the sequence of muscular exertion in neurotic individuals and neurotic states, after the ingestion of food, and sometimes in the absence of discernible cause. To these varieties Hawkins[1] adds another that he describes as postural albuminuria, in which the albumin appears in the urine on arising, standing up and moving about after a period of rest in the recumbent posture. This has been observed most commonly in young persons, and apparently in males more often than in females. It is usually discovered accidentally. The albumin does not appear in the urine passed immediately on arising from bed in the morning, but in that passed after breakfast. Sometimes it is present also after the midday meal, and it is nearly always present in the evening. The amount of albumin is generally small, and hyaline casts are occasionally found. The general health is good, and there is no evidence of disease of the heart or arteries. Several cases may be observed in the same family. The prognosis in all varieties of vasomotor albuminuria should not be too sanguine, as long persistence and frequent repetition of the condition may predispose, if it do not actually give rise, to textural alterations. The treatment should be essentially prophylactic and hygienic, and directed to the maintenance of the general health, with especial reference to the preservation of vascular stability.

THE POLAR REGIONS AS HEALTH RESORTS.

It has been proposed, by an English journal, to establish a sanatorium in Spitzbergen, to take advantage of the germ-free atmosphere of that high latitude. The experience of Nansen, who found an absence of microbes in the farthest north, has suggested this to some active-minded sanitarians. It is a pity that the suggestion is not a more practical one. Germ-free air is not the one essential to health, and the climate of the North Pole has its drawbacks in spite of its aseptic advantages. A short summer sojourn at Spitzbergen would have attraction for a very limited class of individuals, and its therapeutic value might be even more restricted, allowing it to exist at all for a few. As a winter resort, the polar regions are out of the question, though it is in the winter especially that they are most free from microbic life. Dr. F. A. Cook, in a recent magazine article, has graphically described the effects of a winter sojourn in the Antarctic ice, and has given a new and descriptive name—"polar anemia"—to the syndrome produced by it in that supremely aseptic climate and region. One of the officers of the expedition to which Dr. Cook was attached succumbed to this disorder, induced by the long darkness, monotony, and intense cold, which affect both mind and body. Another objection to the northern climate is the fact that those who apparently endure it will often suffer on their return to more temperate latitudes; it is very far from building up an immunity to microbic diseases; on the other hand, it seems to render the system more liable to them. Arctic exposure, though it may be comparatively well endured at the time, is apt to be followed later by various disorders, as rheumatism, bronchitis, tuberculosis, etc., and prominent explorers like Sherard Osborn and others

[1] Letchworth, Wm. Pryor: Care and Treatment of Epileptics, 1900.

[1] British Med. Jour., Dec. 9, 1899, p. 1598; THE JOURNAL, Dec. 30, 1899, p. 1651.

ve insisted on this point in advising as to the selection men for northern expeditions. The fact that a man s had experience was in their opinion rather a draw- ck than otherwise. The utility of an arctic sanatorium such a one is ever seriously proposed, would therefore ppear to be limited. It appears to be a fact that where thogenic germs can not exist, other life is also difficult not impossible, and, such being the case, we will have make the best of it. The polar regions, the Sahara, d other lifeless tracts will have to offer other claims an their heathfulness to render them attractive.

TUMORS OF THE HEART.

Primary tumors of the heart are among the rarest of oplasms. Some years ago Berthenson collected some irty cases from the literature; the majority were sar- omas, and most of them occurred in some part of the ricles, which seem the most susceptible parts of the art to primary tumor growth. The right ventricle may said to be the least susceptible part. Primary sar- omas of the heart very rarely produce metastases; in ct, metastasis was not recorded until recently, when eibel[1] observed a secondary growth in the wall of the ht ventricle following an undoubted primary, round- ll sarcoma originating in the endocardium of the right ricle—interauricular septum. This tumor constituted accidental finding in a post-mortem on a woman, years old. The tumor filled over half the cavity of the ricle, but nevertheless there were no symptoms of ob- ruction in the large veins. The absence of definite mptoms under such conditions is attributable to the adual growth of the tumor, which gave the circulatory paratus good time to adapt itself to the new conditions. is rather difficult to establish, with absolute certainty, e primary nature of a tumor like this. It is necessary exclude all other possibly primary growths in all parts the body, including the skeleton; it must be clearly ade out that no tumors or growths of any kind have en removed by surgical operation, etc. Geibel seems to ow conclusively that his tumor was primary. Metas- tic tumors in the myocardium are not of such unusual currence; they are usually associated with numerous condary growths in other organs, naturally they may be ther of sarcomatous or carcinomatous nature; among e carcinomas, those of the esophagus are the most fre- ent source of the metastasis, which is due to extension d invasion of some of the veins along which carcino- atous emboli are conveyed to the heart; at other times e heart may become involved by direct extension of the mor growth. Geibel mentions a case of this kind in hich a communication was established between the men of the esophagus and the left auricular cavity.

SOME DISORDERS OF THE SENSE OF SMELL.

While one would naturally expect individual varia- ons in the acuity of the olfactory sense, it appears that teworthy alterations in this function, other than as a sult of local disease of the nares, are uncommon, but is may be because close attention has not generally en directed to clinical investigations of the subject. is conceivable that the peripheral filaments of the factory nerve may become the seat of an inflammatory process of varied origin with impairment of the sense of smell; and the same result might be brought about by lesions in the course of the olfactory tract, from the bulb to the as yet unlocated cortical center, such as inflammation, hemorrhage, softening, new-growths, hydrocephalus, laceration, concussion, aneurysm. The situation of the tract at the base of the brain would seem to make it peculiarly susceptible to the operation of such lesions. Infectious processes and toxic influences might also expend their activities in part on the olfactory apparatus. Olfactory hallucinations have been observed in cases of disease of the brain and disorders of the mind. Loss of the sense of smell—anosmia—may be congenital or acquired, unilateral or bilateral. The congenital variety has been observed in idiots, and also in otherwise apparently healthy individuals. The disorder may even be hereditary. In a recent communication, Placzek[1] reports a case of what he believes to be a case of congenital, absolute, bilateral anosmia, occurring in a woman, 60 years old, who had no recollection of ever having experienced the sensation of smell, the perception of odors, but who, strangely, was conscious of her deficiency, and had an intense longing for the exercise of this function. Sensory irritation was appreciated when pungent substances were applied to the nares, but there was no suggestion of smell. There was no evidence and no history of nasal disease, no knowledge of any causative condition, and no other symptom of disease of the nervous system. The derangement is attributed to defective development in the neighborhood of the cornu Ammonis, as this region is said to be frequently found sclerotic on post-mortem examination, and it is believed to constitute a portion of the olfactory center. It is thought there may be also associated atrophy of the olfactory tracts.

CIRRHOSIS OF THE LIVER IN EARLY LIFE.

Although alcoholism is considered the most potent and the most common cause of cirrhosis of the liver, there occur a not inconsiderable number of cases in which no history of excessive ingestion of this substance can be obtained, and not rarely no other etiologic factor can be distinctly ascertained. Malaria is also stated to be a causative factor. It will scarcely be contended that there is anything specific or selective in the action of alcohol in the development of cirrhosis of the liver, but it must rather be concluded that the morbid process is brought about by the irritating action of this substance on the interstitial connective tissues of that organ. It may, however, easily be that the liver is more responsive to the stimulation of alcohol than to that of other irritants. At the same time, it should be borne in mind that the liver, by virtue of its function as a filter of the blood received through the portal vein from the gastro-intestinal tract, is peculiarly exposed to the irritating influence of all sorts of substances, some derived from without and others generated in the process of digestion. Further, there are conveyed to the liver by its arterial supply, irritants generated within the body as a result of deranged metabolism, some of which are certainly not less powerful poisons than alcohol. It is possible that in these facts we have a partial explanation for the oc-

[1] Cbl. f. Path. u. Path. Anat., 1899. x, 848.

[1] Berliner Klin. Woch., Dec. 18, 1899, p. 1119.

currence of the two varieties of cirrhosis of the liver, the portal and the biliary, the structures involved in the hyperplastic process depending on the channel through which the irritant is conveyed. Cirrhosis of the liver is not an infectious disease, but it does not require any great stretch of the imagination to believe that the toxic substances generated in the course of various infectious processes may possibly, in a predisposed individual, inaugurate, if they do not maintain the hyperplastic process. It may be conceived, further, that the irritant products of gastro-intestinal activity—or inactivity—may act in somewhat the same manner. In one or another of these mechanisms may possibly be found the explanation for some cases of cirrhosis of the liver whose origin can not be traced to the usual, or other, etiologic influences. Some such explanation is needed for the cases of cirrhosis of the liver of obscure origin, that occur in young persons for instance. A case reported recently by Abrahams, before the New York County Medical Association, may be considered as unique in this connection. The patient was a child, 16 months old, who within three months had lost appetite, become pallid, was constipated, and exhibited enlargement of the abdomen; there was no jaundice, and there had been no hemorrhage. The abdominal distension was found to be due to an accumulation of fluid in the peritoneal cavity, and this prevented a determination of the size of the liver and the spleen. There was no edema of the lower extremities, and no derangement of micturition; nor was there any evidence of syphilis. By exclusion, a diagnosis of cirrhosis of the liver was made, and on inquiry it was learned that from an early period in life the child had been permitted to drink beer rather frequently. After paracentesis, the liver was found to be enlarged, hard and smooth, and the fluid did not return.

PRIMARY SARCOMA OF THE PROSTATE.

There are only about thirty instances of primary sarcoma of the prostate gland recorded, the majority being collected in the inaugural dissertation of Gratzer, of 1895. Recently Schalek[1] described an additional case from Chiari's laboratory in Prague; it concerned a boy 3¼ years old. In looking over the material at hand, one is at once impressed with the relative frequency of this localization of sarcoma in early life. Four times the patients were less than 1, and seven were less than 10 years old; the remainder being scattered along in the various decennial periods up to the age of 70. Among the more prominent and frequent symptoms may be mentioned the presence of an irregular or rounded tumor of varying size, between the bladder and the rectum, which produces on the one hand urinary disturbances, at times total obstruction, at times increased frequency, catheterization being often difficult, if not impossible, and often productive of hemorrhage; the tumor is tender, often spontaneously painful, the pain being referred to the root of the penis; on the other hand there may be symptoms pointing to the rectum, and occasionally there has been noted total obstruction of the lower bowel. In one case paralysis of the lower extremities developed. Dilatation of the bladder, which may be pushed to one side, and cystitis, may occur. The size of the tumor may reach that of a child's head; in one case it weighed 1570 grammes, in another case it is described as colossal in size. The growth has often filled the pelvis. In its further growth the tumor may involve, by continous extension, the walls of the urinary bladder, the rectum, the urethra, and it may cause protrusion of the perineum. Hydronephrosis, pyelonephritis, peritonitis have been observed as more remote consequences. Metastases have been noted in the peritoneum, the mesenteric, inguinal and retroperitoneal lymphatic glands, in the kidney, adrenal, lungs, brain and humerus. Sarcoma of the prostate does not seem to have such a marked tendency to osseous metastasis as does prostatic carcinoma. Histologically various types of sarcoma are represented, such as spindle—and round-celled tumors—the most frequent, lymphosarcoma, angio-sarcoma, myosarcoma, and polymorphous forms. The clinical course seems to be a decidedly rapid one from the time that symptoms are first noticed and so far operation has terminated disastrously in every instance.

[1] Prag. Med. Woch., 1899, Nos. 43 and 44.

THE ANTIVIVISECTION BILL AGAIN.

The Senate Committee on the District of Columbia will hear arguments for and against the Gallinger antivivisection bill on some day in February, the exact date not given. We may assume it as certain that the zoöphiles will be there in force, with all the documentary support they can command, to reinforce their personal efforts. It is not too late to ask all physicians, medical societies and organizations that have not yet spoken to exert their influence by resolutions, memorials and direct individual work against the bill. Its possibilities for evil have been well pointed out in the medical press, but it is essential that the committee be collectively and individually enlightened. Whoever, therefore, like Dr. R. T. Morris, whose communication has already been noticed in THE JOURNAL, can give his personal testimony as to the value of animal experiments should do so at once. Society resolutions and memorials are good, and we are not likely to have too many of them, but personal influence, arguments, and facts are no less essential. It is to be hoped that no needed efforts will be spared to defeat the bill.

Medical News.

DR. JAMES A. KELLY has been reappointed county physician for South Omaha, Neb.

A NEW monthly, the *Seaboard Med. and Surg. Jour.*, Norfolk, Va., began publication this month.

PHYSICIANS of Muncie, Ind., have organized an association for the protection of its members against "chronic dead beats."

BY THE will of the late Robert B. Brigham, $2,500,000 is given for the founding and endowment of a hospital for incurables, in Boston.

DR. LEON L. SOLOMON, Louisville, Ky., Chairman of the Section on Materia Medica of the AMERICAN MEDICAL ASSOCIATION, returned from Europe January 1.

JUDGE ADAMS, of the United States Circuit Court, recently sustained the Missouri state law in regard to the prohibition of the sale of oleomargarin as butter.

A MEETING of the Michigan State Medical Board will be held in Lansing, January 22, at which time the issuing of certificates to physicians will be commenced.

DR. M. COURET, New Orleans, La., has been appointed assistant pathologist of the Charity Hospital, to succeed Dr. S. F. Mioton, who has resigned to assume the position of assistant coroner.

THE BOARD of Managers of the New Jersey Hospital for the Insane, near Trenton, in its recent report to the Governor, states that the hospital now cares for 1170 patients, a number largely in excess of its capacity.

A NUMBER of medical practitioners of the Straits Settlements have offered to guarantee a prize of 25 guineas to he University of Edinburgh, for special researches in tropical medicine. The prize is open to students or graduates of medicine of not more than two years' standing.

COLUMBUS DRAKE, the oldest resident of Monmouth County, N. J., died on January 12th, at his home near Matawan. He was 100 years and 11 days old, having been born in Ireland, Jan. 1, 1799. He was never married, and lived with a sister who is said to be nearly 100 years of age.

THE SILVER jubilee number of the *Deutsche Medicinische Wochenschrift,* just received, contains reviews of the last quarter-century in surgery, hygiene, etc., each written by a leading specialist, eight in all, Czerny, Quegge, von Leyden, etc., illustrated with twenty fine portraits of Germans who have contributed most to the progress of the medical sciences during this period, with Lister, Darwyn and others.

THE COMPETITIVE examination for internes at Paris, which was arrested by the destruction of the papers all unexamined, mentioned in THE JOURNAL of Dec. 9, 1899, will proceed by awarding the percentage of positions proportionate to the number of papers examined before the outrage, the perpetrators of which are still unknown. The rest will undergo another examination for the ten places remaining.

BOURNEVILLE comments, in an editorial in the *Progrès Méd.,* on the action of the police of England in seizing, Dec. 19, 1899, all the copies of the translation of Féré's "Pathology of the Emotions" and the second volume of Havelock Ellis' "Studies in the Psychology of Sex;" "we are awaiting with interest the opinion of the English medical press on this strange measure which we should have thought impossible at our epoch."

WHEN THE Dreyfus case was in progress, one of the smaller Paris dailies insinuated that Labori had not been shot at all, and that the whole story of the shooting and the bullet were fabricated to arouse sympathy for the Dreyfus side. Labori sued the paper for damages, and nearly a dozen physicians testified in regard to the actual accident. Even a radiograph of the bullet was produced. It is unnecessary to add that Labori won his case.

THE NEWLY organized medical club of Paris issues special cards of membership to out-of-town and foreign medical men visiting Paris. These entitle them to all the numerous privileges of the club during their stay. A special department has been organized to secure rooms for physicians during the exposition and supply information of all kinds. Dr. Doléris, 5, avenue de l'Opera, is the secretary. The club has the advantage of the quarters of the *Cercle National.*

A CHICAGO alderman proposes a law that will strike terror to the hearts of hold-up men, foot-pads, burglars and criminals generally. His proposition is to give a reward of $200 for the killing of burglars, etc., by any officer or citizen. The report says that the alderman in question is a devoted church member, and we presume he is. From a medical standpoint the proposition is of interest as an example of male hysteria under certain conditions. A reward for burglar scalps does not look very well in these days and the very thought of such a thing is not a good commentary on the morals of a city that would even suggest this in the last year of the nineteenth century.

ANTIALCOHOL SERUM.—According to *Progrès Méd.,* Broca, Sapelier and Thibaut announced at the meeting of the Paris Acad. de Méd., Dec. 27, 1899, that they had succeeded in obtaining a serum from a horse habituated to the use of alcohol that, injected into animals with a cultivated appetite for alcohol, produced such a disgust for it that they would neither eat nor drink if it were offered them. Clinical tests confirmed this experience. The action of the serum seems restricted to the latent period of chronic alcohol intoxication. The subject loses his appetite for alcohol or any beverage containing it, and may even acquire a disgust for it and renewed susceptibility to its effects. He retains his taste for *wine,* the Frenchmen are careful to add, and retains strength and appetite, but the serum is unable to repair the organic damages already inflicted.

COLLEGES OPPOSE MEDICAL COUNCIL.—At a recent meeting of the presidents of the various colleges of Pennsylvania, the resolution in regard to the recent ruling of the Medical Council, providing that all students would be required to take a four years' course in medicine whether they had previously taken advanced work or not, was considered at some length. Considerable opposition was found to exist to this ruling, and a resolution adopted by the Association of College Presidents of Pennsylvania heartily sympathizes with all efforts to raise the standards in the medical profession, but they are unanimously of the opinion that no harm has been done in this respect by admitting to the second year in medicine men who have taken their bachelor's degree in reputable colleges, and who, during their undergraduate course, have taken work equivalent to that required in the first year of our best medical colleges. A committee has been appointed to confer with the Medical Council in order that the resolutions passed may be rescinded.

MEDICAL ETIQUETTE AND A LEGAL DECISION.—We have heard of medical etiquette occasionally being the subject of attack and ridicule in court proceedings, but a recently decided case shows that it has at least a legal sanction. A physician was called to a case and rode six miles only to find another physician in charge. He therefore refused to treat the patient, but sent in a small bill for his time. Being obliged to sue for his pay, he was met with the defense that he had rendered no service and was therefore entitled to no pay. The county judge, however, held that the observance of medical etiquette was legitimate for the physician, and that when called to see a case and finding it in charge of another, the law implied that he was not obliged to take the case. The decision was therefore in the doctor's favor, the judge recognizing even the finer point in medical ethics, which are not always duly appreciated by jurists.

QUACKERY IN AUSTRIA.—The Austrian minister of the interior decreed, in 1898, that charlatans residing in other countries should not be allowed to advertise

their methods and remedies in Austria. In consequence several issues of the Vienna daily papers were confiscated last spring on account of the advertisement of some foreign charlatans, and the measure proved effective. The medical society keeps the authorities informed whenever the advertisements try to creep in again. One medical society has made out a list of all the charlatans in its district, and given it to the authorities with the request that they be kept under strict surveillance. The Vienna correspondent of the *Münch. Med. Woch.* adds to the above that a local "nature-healing institute" is now "publishing the names of several physicians as associates in the institution, and we are curious to learn whether the next Medical Chamber will remedy this."

INFLUENZA IN EUROPE.—During the past few weeks an epidemic of influenza has been prevalent to an alarming extent in London and in adjacent cities. The *British Medical Journal* of January 6 reports 193 deaths during the week ended Dec. 30, 1899. Of the 193 deaths nearly one-half of that number occurred in persons over 60 years of age. Deaths due to diseases of the respiratory organs showed an increase of 50 per cent. above the average, 1172 being reported. An epidemic of influenza in Barcelona was reported in the press dispatches, January 15. The statement was made that half the population of that city is affected.

THE PLAGUE.—The situation remains practically stationary, according to the official reports which follow: Santos, Brazil, October 15 to December 9, 37 cases and 11 deaths; Hongkong, China, November 16 to 28, 12 cases and 12 deaths; Bombay and Kurrachee, India, to December 12, 6 cases and 107 deaths; Tamsui, Formosa, October 17 to November 28, 36 cases and 6 deaths; one death was reported from Kobe, Japan, December 7; Osaka and Hiogo, Japan, report 3 new cases and 2 deaths, November 25 to December 2; 10 cases and 7 deaths are reported from Tamatave, Madagascar, November 11 to December 3. From Honolulu, 2 cases and 2 deaths were officially reported January 5. Later press dispatches convey the information that there have been 22 cases in all. The disease has been confined almost entirely to Chinese, although there have been cases in the Japanese colony, and at least two among the natives. It is said that none of the Chinese has recovered. The Board of Health has decided to destroy the Chinese quarter by fire. A military cordon has been maintained about the infected districts. The Council of State has appropriated $270,000 for the immediate use of the Board. Press dispatches from Manila state that there have been 6 cases and 4 deaths since the discovery of the disease. Several suspicious cases of the disease at Adelaide, South Australia, have proved to be bubonic plague. At Osaka, Japan, it is reported that two Japanese physicians have died of plague.

MEDICAL SERVICE IN THE TRANSVAAL.—In the *British Medical Journal* of Dec. 30, 1899, Makins gives extended surgical notes from the Orange River, under date of December 3. He calls especial attention to the fact that the wounds made by the Mauser and Lee-Metford bullets are small, clean, and little disposed to suppurate, while the tendency to suppuration is no doubt decreased by physical condition of the patients and the healthiness of the district. Shock has been conspicuous by its absence, even in the most serious cases, and retained bullets comparatively uncommon, no doubt from the fact that most of the wounds were received during rapid advances. There has been little deformity of the bullets met with, except where they struck stones before entering, and wounds of the soft parts have been, as a rule, simple tracks, with but little difference between the aperture of entry and that of exit, and the wounds of great vessels have been very limited in number. He thinks that the wounds of the individual nerves will be a great feature of the campaign, while fractures are for the most part transverse, or the bones are tunnelled. Joint perforations are common, especially of the knee; wounds of the head are proportionately limited in number, while those of the neck have been very common, as have perforating wounds of the chest. Those of the extremities, especially the upper part of the lower, continue to be much in evidence. The *Journal* also announces that four additional consulting surgeons have been appointed: Sir William Stokes, Mr. Watson Cheyne, Mr. G. L. Cheatle, and Mr. Kendal Franks. The first named was to leave for the Cape the 30th ult. In the *Lancet* for the same date, the special correspondent writing from Wynberg, under date of Dec. 12, 1899, considers the cases in the No. 2 General Hospital, which has now been established at Wynberg, adjacent to No. 1, a description of which was given in these columns last week. He notes that particularly among the Highland regiments spinal wounds have been most frequent, probably from the fact that their kilts afford a target when the men are lying down. No. 3 General Hospital is to be established at Rondebosch, about four miles from Nos. 1 and 2, between Wynberg and Cape Town. When this is complete the three will provide accommodations for upward of 1600 patients. He condemns the action of the Boers in throwing their dead into the Modder River after recent engagements, as this source affords water-supply for several townships and villages, and the practice is contrary to all rules of civilized warfare. Sir John Furley has also embarked for the seat of war, to be connected with the ambulance service. (*Lancet*, January 6).

PENNSYLVANIA.

DR. A. F. BRONSON, Girardville, has been appointed surgeon with the rank of first lieutenant, in the 8th Regiment, P. N. G.

DEPUTY U. S. Collector C. W. Evans recently seized 100 pounds of oleomargarin sold as butter by a resident in Pottsville. The seller was also fined $200.

AT A meeting of the Directors of the Lancaster General Hospital, it was announced that $5000 had been given to that institution by a friend living in Philadelphia, but whose name for the present had been withheld.

THE REPORT of the Germantown Hospital announces that during the year the cases treated numbered 14,355, as against 7917 the previous year. In other words, 81 per cent. increase was noted. Two new clinical rooms have been added, and the staff has been reorganized. During the year the total expenses were $34,800, and the income $28,600.

IT IS said that Frank Martsolf and wife, of New Brighton, have been for several years believers in "Christian Science," and are opposed to the administration of drugs and the care of doctors. Diphtheria in a very malignant form attacked their three children, two of whom are now dead, while the father and one child are at the point of death from the same disease.

POLLUTION OF RIVERS.

The question of the pollution of the rivers of Pennsylvania, including the Schuylkill at Philadelphia, seems to be a very large one. The State Board of Health has for many months tried to remedy the matter, but it appears without avail. As is well known, there is no national health officer to look after affairs of this kind, and the State Board is waiting to see what will become of the bill recently introduced in Congress providing for a United States Commission to investigate the pollution of streams. Attention is directed to the fact that Congress recognizes its responsibility for the condition of inland waters, and

that it might also look after that used for drinking water. It is therefore proposed to place matters under Federal control should this bill become a law.

Philadelphia.

DRS. W. W. KEEN, John H. Musser, Charles P. Noble, John B. Deaver and Alfred Stengel were in attendance at the meeting of the Berks County Medical Society, held in Reading, January 9.

THE BOARD of Charities and Correction has appointed Dr. H. Augustus Wilson to the position of orthopedic surgeon to the Philadelphia (Blockley) Hospital.

NORTHWEST MEDICAL SOCIETY.

The meetings of this society are held the first Tuesday of each month. The officers elected at the annual meeting, January 3, are: president, S. P. Gerhard; vice-president, I. M. Koch; secretary, William Egbert Robertson; treasurer, Hugh Hanna.

ALUMNI SOCIETY OF MEDICAL DEPARTMENT OF UNIVERSITY OF PENNSYLVANIA.

During the past five years, the Executive Committee of this Society has been constantly gathering data for the forthcoming matriculate catalogue. Further contributions are still desired, especially biographies of Samuel Duffield of Philadelphia, Humphry Fullerton of Lancaster, Pa., David Jackson of Chester, Pa., and Jonathan Potts of Philadelphia, all of the first graduating class of 1768. The Society has published a list of graduates in the army and navy in the Spanish War, also of the deaths of alumni during the year 1898 and six months of 1899.

PHILADELPHIA POLYCLINIC.

The medical staff of the hospital now numbers 150 teachers and assistants. The reports show that 85,584 visits to the dispensary were made during the past year, while the number of accident cases increased 1883 over the previous year. The following officers were elected: president, William E. Donovan; vice-president, William N. Ashman; secretary, Franklin B. Kirkbride; treasurer, J. E. Sterrett.

PHYSICIAN FINED.

Recently a physician was subpenaed to testify in the case of a boy who had "stumped" his toe and was subsequently taken to the receiving ward of a certain hospital. Suit was brought against a man who had kicked the boy, and so the attendance of the physician was desired. On failing to appear at the proper time the judge fined him $20 and costs.

BOGUS INSPECTOR.

Within the past few days a bogus medical inspector has come to grief. A man called at a private house and told the landlady that he had been sent by the Board of Health to inspect the cellar. On being requested to show his authority the man became angry, and before he could make off the husband appeared and took him to the proper authorities, where he was put under $600 bail.

REPORT OF GERMAN HOSPITAL.

The annual report of this hospital shows 2890 patients admitted during the year, 163 remaining on Dec. 31, 1899. The dispensary visits numbered 37,071, of which 21,274 were surgical cases. During the year 806 ambulance calls were made. At the Mary J. Drexel Home, which is a separate department of this hospital, 5797 dispensary patients received treatment, and 382 were admitted to the home. The total receipts for the year were $85,142, and the expenses $85,078.

MORTALITY STATISTICS.

The number of deaths during the week just closed was 504, a decrease of 9 over the previous week, and of 38 over the corresponding period of last year. The principal causes of death were: apoplexy, 19; nephritis, 35; cancer, 1; tuberculosis, 55; heart disease, 38; influenza, 4; pneumonia, 82; peritonitis, 13; appendicitis, 2; poisoning, 3; septicemia, 3; suicide, 2.

CORONER'S REPORT.

The annual report of the coroner shows that during the past year 2559 inquests were held in this city, 1636 males and 923 females, an increase of 69 over the previous year. Some of the principal causes of death were: burns or scalds, 149; heart disease, 211; tetanus, 20; electric shocks, 6; homicides, 26; suicides, 182; poisoned, 68; alcoholism, 44. The Ladies Aid Society of the Presbyterian Hospital has announced that the sum of $4000 has already been raised toward the founding of the third children's bed, leaving only $1000 yet to be collected.

SCHOOL INSPECTION.

Like every other good innovation looking to the interest of the public health, some opposition has become manifest in regard to the inspection by physicians of the different public schools of Philadelphia. Until the method has proven to be useful, and until the people are sufficiently instructed as to the objects of such a plan, complaints from various sources will doubtless be heard on many sides. Already some outspoken words have been made public to the effect that some parents will not consent to have their children "examined" by a strange doctor. The movement is appreciated, however, by the sensible people, who in the end will always prevail.

SUIT FOR INSURANCE.

The widow of Dr. Orange W. Braymer entered suit against the Provident Mutual Accident Company of this city to recover $5000 alleged to be due on an accident policy. It was stated that Dr. Braymer took out a policy with the above-named company on July 5, 1895, and made all payments until the time of his death, Jan. 9, 1898. He was performing an operation on January 3, and inoculated a slight cut. Septicemia developed and he died six days later. The jury rendered a verdict of $5475 for the plaintiff.

NEW YORK.

GOVERNOR ROOSEVELT has appointed Dr. George Elmer Graham, Albany, on the Board of Managers of the Craig Colony for Epileptics.

F. J. H. KRACKE, assistant commissioner for the Eastern division of the State of New York, states in his annual report, which has just been submitted to the legislature, that the past year has been one of marked activity in the detection of food adulteration, 220 violations of the law having been successfully prosecuted.

New York City.

DR. JAMES W. MCLANE, dean of the faculty and emeritus professor of obstetrics in the medical department of Columbia University, was elected a vice-president of the Union League Club, at the annual election held January 11.

THE HOSPITAL Saturday and Sunday Association announces that there is every indication that the collection this season will be the largest ever obtained. The Woman's Auxiliary is especially active, the ladies having determined to raise $10,000.

COMMISSIONER of Charities Keller has dismissed twelve physicians from the staff of the Metropolitan Hospital, who, because of differences with the superintendent, are said to have hanged him in effigy, using a cadaver for the purpose.

ASSEMBLYMAN T. P. SULLIVAN has introduced a new cigarette bill into the legislature. It requires dealers to obtain a tax certificate, signed by five reputable citizens of the locality, and take oath that the cigarettes do not contain injurious drugs or narcotics. The fee for this is $50. The penalty is a fine of $50 or imprisonment for sixty days.

AN UNFORTUNATE JUDICIAL DECISION.

On January 9, the court of appeals handed down a decision in the case of the State Board of Charities against the New York Society for the Prevention of Cruelty to Children. The action was brought to compel the Society to submit to state inspection. The opinion was rendered on a vote of four to three, and is apparently much more far-reaching than most of the judges themselves realized. The question at issue was whether or not the Society was a "charitable institution" in the meaning of the constitution, for, if so, it would be subject to inspection by the State Board. The decision states that the term "charitable" is here used in a very restricted sense, i. e., it applies only to governmental charity, or, in other words, to those institutions deriving their support wholly or in part from taxation. The original intent of the action has, therefore, been greatly exceeded, for instead of affecting about twenty institutions in the state, it is made to apply to several hundred, most of which have never objected to the visits of inspection of the Board. Many orphan asylums, hospitals, dispensaries and other charitable institutions are, by this remarkable decision, taken out from the list of those subject to the supervision of the State Board. In the minority report of the three dissenting judges, pointed and very significant reference is made to the great difficulty that had been experienced

in this case by the jurists to avoid bias, and then follows this: "Yet it is our imperious duty to close our eyes to questions of policy and personal friendships and simply decide the question before us without any regard to whom it will affect." The attorney-general purposes to move for a reargument.

MARYLAND.

Baltimore.

DR. WILLIAM WHITRIDGE WILLIAMS has been appointed assistant in the Johns Hopkins Pathological Laboratory.

DRS. E. A. MUNOZ, H. M. Bagley and H. Baxley have been re-elected physicians to the Baltimore General Dispensary.

DR. JOHN D. BLAKE, professor of surgery in Baltimore Medical College, has been elected president of the Crescent (Dem.) Club.

DR. S. GRIFFITH DAVIS, assistant-surgeon of the Fifth Maryland Regiment, has been elected adjunct professor of operative surgery in the Woman's Medical College.

DRS. J. H. M. KNOX, J. M. Lazear, Samuel Armburg and Flora Pollack have been appointed on the resident staff of physicians in the dispensary of the Johns Hopkins Hospital.

DR. WILLIAM H. WELCH has been elected president of the State Board of Health, vice Dr. S. C. DeKraft, who is now a surgeon with the army in the Philippines.

MESSRS. JOHN OCHSNER, L. K. Karsted and G. K. Wright, graduates respectively of Leland Stanford, Junior, University, the University of Wisconsin and the University of Michigan, have been appointed assistant demonstrators of the Johns Hopkins Medical School.

HERETOFORE the night watchman at the City Hall Annex of the Health Department has received diphtheria culture-tubes and given antitoxin at all hours of the night. Hereafter culture-tubes will have to be left at the bacteriologic laboratory by 6 p.m. Antitoxin will be given out at the private office of the health commissioner until 11 p.m.

AT THE obstetric ward of the Johns Hopkins Hospital, to avoid mistake by frequent change of nurses, each baby is tagged. On a small square of waterproof adhesive plaster is written the baby's name, and the plaster is then stuck to the baby's back between the scapulæ. The daily baths do not affect it and it is readily pulled off when the child is taken away.

WITH THE appropriation made by the city, three summer bathing stations have been maintained and plans are being prepared for keeping the baths open all the year. Through the gifts of Mr. Henry Walters—two lots in the eastern part of the city, valued at $50,000—the Walters Public Baths are now being erected. The first of these two indoor bath-houses will be opened about March 1.

MORTALITY STATISTICS.

For the week ended January 7, there were 212 deaths in Baltimore, the death-rate being 20.27 per 1000, viz., white 18.08, colored 34. The deaths were 108 males and 95 females. From diphtheria there were 68 deaths; measles, 52; mumps, 2; scarlet fever and typhoid fever, each 7; whooping-cough, 2; Bright's disease, 13; cancer, 6; influenza, 3; croup, 1; pulmonary tuberculosis, 18; burns, 2; railway accidents, 1; asphyxiation, 1; hot liquid scalding, 1; drowning, 1. The number of births reported was 692.

MARYLAND HOSPITAL FOR INSANE.

The 102d annual report of the Maryland Hospital for the Insane shows receipts of $149,058, and disbursements of $140,040. The former were the state appropriation, Baltimore's payment for city patients and payments by sundry counties and pay patients. The number of patients admitted during the year was 80; in the hospital, Nov. 1, 1899, 535—279 males and 256 females. Of 36 discharges, 21 had recovered and 4 were improved; 43 died. Extensive improvements were made during the year.

THE MILK SUPPLY.

The United Milk Producers' Association of Baltimore, composed of farmers and milk producers, and intended to furnish pure milk to consumers in this city, began business on the 15th inst. The capital stock is $200,000. It is claimed that there is much adulteration at present, and that at present prices there is no profit to the consumers. The producers are now receiving only 12 to 13 cents a gallon, and the city test requires 3.5 per cent. of butter, which means about 12 per cent. of cream. It is proposed to increase the per cent. of cream to 16 and ward, and to charge 16 to 18 cents a gallon for the mi About 25,000 gallons of milk are received daily in this city.

HOSPITAL FOR CONSUMPTIVES.

M. B. F. Newcomer, who gave $10,000 to the Hospital f Consumptives last summer, has offered another $10,000 pr vided a like amount is raised. The hospital is located in t suburbs and has fifteen acres of land. An annex has just be built, with a number of bathrooms and other convenience The management intends building cottages on plans similar institutions in the Adirondacks and elsewhere. The repo shows 41 cases treated during the year, of which 16 left in a improved condition; in 5 the disease was arrested, there a 11 now under treatment. In addition to the first gift of M Newcomer, $4500 has been received on account of the buildi fund and toward the general expense, and $1500 is appropria annually by the city.

DISTRICT OF COLUMBIA.

HEALTH OF THE DISTRICT.

The report of the health officer for the week ended January shows the total number of deaths to have been 117, of whi 75 were white and 42 negroes. The principal causes were he and nervous diseases. There were 53 cases of diphtheria, 98 scarlet fever and 4 of smallpox under treatment at the close the week.

Washington.

AT THE 309th meeting of the Washington Obstetrical an Gynecological Society, held at the residence of Dr. Cook, D Ballock read an essay entitled "Hernia in Children."

CASUALTY HOSPITAL.

At the recent meeting of the Board of Directors of the Eas ern Dispensary and Casualty Hospital, the report of the st for the past month showed that 741 cases had been treated, which number 195 were emergency cases. The hospital is doi a good work and generally extending its scope, and expec shortly to reconstruct the present building and equip it wi every modern surgical appliance. Its staff and directora include many of Washington's best citizens and most promi ent physicians, but their value to the community is great lessened by the lack of sufficient Congressional appropriati

DENTIST FOR THE ARMY.

Mr. Otey of Virginia has introduced a bill in the House Representatives (H.R. 972), which provides that the surgeo general of the army, with the approval of the secretary of w shall employ and appoint dental surgeons to serve the office and enlisted men of the regular and volunteer army in th proportion of one dental surgeon to every 1000 of the arm These surgeons shall be employed as contract dental surgeo under the terms and conditions applicable to army contra surgeons, and shall be graduates of standard medical or dent colleges, trained in the several branches of dentistry, of go moral and professional character, and shall pass a satisfacto examination.

DR. SAMUEL C. BUSEY.

The profession recently learned with regret that the presid of the Washington Medical Society, Dr. Samuel C. Busey, wou not accept re-election to office for the ensuing year. Dr. Bus has served the Society as its president for six years, and fear on account of failing health, that he would not be able to d vote the time and labor which so important a position require To Dr. Busey's management and efforts are largely due th recent good work of the Society, and the passage by Congress many legislative acts of great importance to the local profe sion. The Society has acted wisely in calling to the presidenc Dr. Acker, who has the skill and ability to continue the go work of his predecessor.

OHIO.

Cincinnati.

HEALTH Officer Tenney is preparing a bill for presentation the legislature to compel barbers to sterilize their tools.

DR. J. C. CULBERTSON, proprietor of the *Lancet-Clinic*, wa elected a member of the American Social Science Associati

DR. S. P. KRAMER, late major and surgeon, U. S. V., and D

H. C. Handley, have established a private hospital, exclusively for surgical cases.

THE PUBLIC library is in daily communication with the Health Department, and no books will be loaned where infectious cases are reported, and no books will be received from infected houses, except through the health officers.

THE REPORT of the Bureau of Infectious and Contagious Diseases of the Health Department showed, for December, 1899, 201 cases, against 191 for the corresponding month of 1898. The prevalence of influenza during 1898 is assigned as the cause of the difference.

BETHESDA HOSPITAL ASSOCIATION.

At the annual meeting of the Board of Trustees of the Bethesda Hospital and Deaconess' Home Association, reports were read showing the increased prosperity of this Association. It was announced that the hospital had received a donation of $1000 from Mr. Frank Kreihler of Pennsylvania. The building fund of the hospital is $15,000 in debt, but $5000 of this is in hand and the board hopes to collect the remaining $10,000 by July 1.

Cleveland.

THE ANNUAL report of St. Alexis Hospital shows that 1997 patients were received during the year, and that 1762 were discharged as cured.

ILLINOIS.

THE HEALTH authorities fear a general spread of smallpox throughout the state, as the disease was prevalent for a long time without proper measures being instituted to check its progress. Fresh cases are being reported daily.

Chicago.

DR. J. B. HERRICK has returned from Europe.

THE GREAT sanitary drainage canal was opened January 17.

A BANQUET was given by the Medical Women's Club, January 16.

THE ANNUAL report of St. Anthony's shows that 820 patients were treated in that institution during the past year.

DR. WILLIAM CUTHBERTSON, M.D., has been appointed attending gynecologist on the staff of St. Luke's Hospital.

THE QUARTERLY examinations of the Illinois State Board of Health were held January 16; 11 physicians, 18 osteopaths and 14 midwives were examined.

AN EXAMINATION by the coroner developed the fact that a two year-old child died from measles while under the care of a disciple of Dowie.

THE RECEIPTS from the ball given by the Young Hebrew Charity Association, January 9, were nearly $33,000. This sum will be divided among the hospitals and benevolent societies.

SCHOOL INSPECTION.

The medical inspection of schools, inaugurated by the Board of Education, resulted in the examination of 3045 pupils during the past week, of whom 323 were excluded from schools because of the danger of infecting the other pupils.

SUIT FOR LOSS OF EYESIGHT.

An employee has begun suit for $10,000 against a local brewing company for the loss of his eyesight. His work consisted in shellacing barrels and kegs, and it is asserted that the wood alcohol fumes gradually destroyed his sight.

PROVIDENT HOSPITAL.

The Esther Freer Hall, the gift of Nathan M. Freer to Provident Hospital, is nearing completion and will be dedicated in February. The structure is a four-story building, to cost nearly $30,000, and will be used as a school and dormitory for the nurses. An addition is now being made to the hospital proper, which will cost $18,000.

MORTALITY STATISTICS.

The total mortality for the week ended January 13 was 7 less than that of the week preceding, and 46 less than the corresponding week of 1899; 129 of these deaths were from pneumonia and bronchitis, or slightly more than 23 per cent. of the total. Compared with the corresponding week of 1899, this is a slight reduction, as the mortality at that time was 127 deaths from pneumonia and 31 from bronchitis, a total of 158. There was but 1 death from la grippe, as against 13 deaths during the corresponding period of 1899. There has been a slight decrease of diphtheria during the past week.

KENTUCKY.

KENTUCKY COLONY FOR EPILEPTICS.

Senator Alexander of Louisville has introduced a bill in the legislature providing for an appropriation of $50,000 to establish a colony of epileptics, in Jefferson County, to be connected with the Central Insane Asylum at Lakeland, near Louisville. This bill should receive the hearty support of the medical profession throughout the state.

Louisville.

THE GOLDEN anniversary of the Kentucky School of Medicine, Louisville, was celebrated with appropriate exercises, January 2.

THE MEDICAL COLLEGES.

The spring and summer medical colleges began their annual session on January 2, all opening with large classes. Kentucky University's medical department holds its first session in its new building, acquired during the summer of 1899.

HOME FOR AGED AND INFIRM.

The report of the superintendent of the Home of the Aged and Infirm has just been presented to the Board of Safety. It shows that the inmates are supported at a cost of 12½ cents a day, there being 356 inmates during 1899. The total expenses were $17,315. The state contributes a sum, yearly, for the maintenance of pauper idiots. During the year 27 patients died, mostly from senility; the oldest that died claimed to be 118 years of age.

REPORT OF ERUPTIVE HOSPITAL.

Dr. Harris Kelly, in his report of the Eruptive Hospital, shows 548 cases treated during the year, with 6 deaths. There were 91 white and 157 colored patients. The epidemic of smallpox began Dec. 4, 1898, lasting until August 29, 1899. There were two cases of scarlatina, six of erysipelas, and 1 of diphtheria, with no deaths.

WISCONSIN.

Milwaukee.

FIRE, THE second in ten days and due to a defective furnace, damaged the Wisconsin General Hospital, in this city, January 10. The loss was $200.

THE CHILDREN'S Free Hospital will receive about $1000 as its share from the receipts of the Twentieth Century Festival recently held in this city.

THE ANNUAL report of the Milwaukee Hospital for the Insane shows that 583 patients were treated during the year. The percentage of recoveries was 33, and the death-rate 7 per cent. The improvements during the year amounted to $3807.

Correspondence.

Mercurial Ointment in Erysipelas.

WASHINGTON, D.C., Jan. 13, 1900.

To the Editor:—Referring to the paragraph relative to Dematteis' observations on the efficacy of mercurials in the treatment of erysipelas (THE JOURNAL, January 13, p. 110), I wish to say that for many years I have used mercurial ointments for the treatment of this disease, successfully. I recall one case, about twelve years ago, in which I applied the white precipitate ointment, and it healed the disease so quickly that the patient's friends became alarmed, declaring the doctor had driven the *disease in*, consequently another medico was substituted to draw it out. I give this fact for the benefit of Dematteis, hoping he may not be subjected to a like experience.

Very respectfully,

JOSEPH T. HOWARD, M.D.

Canada.

(From Our Regular Correspondent.)

TORONTO, Jan. 13, 1900.

SURG. LIEUT.-COL. WORTHINGTON, Sherbrooks, Quebec, and Surgeon-Major Duff, Kingston, Ont., are to have charge of the medical affairs of the second Canadian contingent.

SURG. LIEUT.-COL. RYERSON, Toronto, goes in the interests of the Red Cross Association, and will not be assigned any professional duties either on the voyage out or on his arrival at Cape Town.

THE DOCTORS of Victoria, B. C., have formed a local medical association. One of the most important articles of their constitution is that its members shall not act as lodge physicians.

KAMLOOPS, B. C., still continues to be very much exercised over its general hospital. At a public meeting a short time ago, Dr. Proctor presented the financial report and, after hearing it, the meeting passed a unanimous resolution asking for government assistance in order to support the town in carrying on the institution.

THE GENERAL health of Vancouver, B. C., has been good the past year. The city has three well-equipped and properly maintained hospitals, and has been entirely free from epidemics during the year. Infectious diseases during 1899: scarlet fever, 34; diphtheria, 7; typhoid fever, 40; measles, 90; rothelia, 4; whooping-cough, 17.

SCHOOL FOR THE BLIND.

A new and spacious school for the blind has been erected in Montreal, and is to be conducted by the Sisters of Nazareth. Owing to the lack of space in the old class-rooms of the Nazareth Asylum for the Blind, so many children were unable to gain admittance to the classes that the sisters, in order to supply this want, have erected this modern building, said to be a model of sanitation destined to prove a great benefit to the blind of the city of Montreal.

TRANSPORTATION OF THE SECOND CANADIAN CONTINGENT.

A number of the crew of the steamship *Montezuma*, at Halifax, have developed typhoid fever, and an investigation into the sanitary condition of the vessel has been ordered, as she was to sail for South Africa with Canadian troops. It is believed that the disease has arisen from the inferior quality of water taken on board at New Orleans, at which port the vessel last touched on her return voyage to Canada. If it turns out that such is the case, Dr. Montizambert is satisfied that by properly cleansing the tanks the danger will be removed.

HEALTH OF MEN ON PUBLIC WORKS.

During the last session of the Dominion Parliament an act was passed giving the government authority to provide, by regulations by the Governor-in-Council, for the proper safeguarding of the health and well-being of workingmen employed on public works. This act confers extensive powers on the government in the making of regulations regarding the medical treatment, sanitary inspection and other matters relating to the proper treatment of these men. The Minister of the Interior is now pressing on his colleagues the desirablity of putting this act in force by establishing these regulations; and it is understood that a very complete set of rules is being prepared, providing for inspectors whose duty it shall be to see that the regulations are properly carried out.

CARE OF THE EYES.

The assistant ophthalmologist of the Royal Victoria Hospital, Montreal, Dr. W. G. M. Byers, delivered a public lecture last week on this topic. After elaborating a set of rules for the guidance of his auditors, he spoke of the laxity of the Dominion Government in regard to the admission of immigrants suffering from granular ophthalmia, and stated that if care were not taken, the question of trachoma schools would have to be faced at no very distant date. He further spoke of the recent renovation of the Montreal General Hospital, which had placed that institution on the most approved modern footing, and referred to the princely generosity of Lords Strathcona and Mount Stephen, which had added greatly to the facilities in that institution, for the sick poor obtaining relief.

TORONTO ORTHOPEDIC HOSPITAL.

During the fifteen months of its existence—July, 1898, to Sept. 30, 1899—there have been 172 admissions and 165 discharges. The collective days' stay at the hospital has been 3306, and the average days' stay per patient 19.22. Of the 172 patients admitted, 100 were under, and 72 over, 14 years of age; 98 were male and 74 female. Of surgical operations performed there have been 174, this number including only those which were sufficiently severe to require an anesthetic; only one death has occurred. There is a training school for nurses and an out-door clinic. The Toronto Orthopedic Hospital is the only institution in Canada which devotes its work exclusively to the treatment of the lame, crippled and deformed; although in Toronto the Victoria Hospital for Sick Childr has done great and good work along these lines. Of the 1 patients admitted, 44 resided in Toronto, the remainder comi from the towns, cities and villages of Canada, and in a few i stances from across the border. All the apparatus for mecha ical treatment is directly under the supervision of the surge and is manufactured on the premises; and the hospital is pr vided with a gymnasium.

Deaths and Obituaries.

JOSEPH C. MULHALL, M.D., St. Louis, Mo., died January 1 Driven to desperation by a disease from which he did n expect to recover, he shot himself, causing instant death. H was a native of St. Louis, and a graduate of the St. Louis Un versity. He graduated in medicine from the St. Louis Medic College in 1873, and then went to Europe for further studi He received the L.R.C.S., Dublin, in 1874. After studying f several years on the Continent, he returned to St. Louis a began to practice, choosing diseases of the ear, nose and throa as his specialty. He was professor of diseases of the throa and chest and of climatology in Beaumont Medical Colleg and professor of physical diagnosis in the Alexian Brother Hospital.

THOMAS KING CARROLL, M.D., died near Cambridge, Md January 9, aged 78. He was the son of Governor Thomas Kin Carroll, and was born at the ancestral home, "Kingston Hall Somerset County. He began the study of medicine, afte graduating at Washington Academy, Princess Anne, in th office of Dr. Samuel Handy, and later of Dr. Samuel Chew. H took his M.D. degree at the University of Maryland in 184 settled in Dorchester County, was a member of the legislatur from 1860, for two terms, and member of the state senate i 1863. He was in active practice over 52 years. He was consul ing physician to the Cambridge Hospital (United Charitie Hospital).

DR. ALBERT EDWARD HOADLEY, of Chicago, died January 1 He was born at Chenango Forks, N.Y., in 1847, and was gradu ated from the Chicago Medical College in 1872. He immedi ately commenced the practice of medicine in Chicago, where h remained until his death. He was professor of orthopedics an surgical diseases of the joints in the College of Physicians an Surgeons and in the Chicago Policlinic. He was the author o a number of surgical papers and a member of several medica societies.

CHARLES A. SIEGFRIED, M.D., Jefferson, 1872, died at New port, R.I., January 15. He was in charge of the naval hospita at Coaster's Harbor Island. During the Spanish-American Wa he was in charge of the naval hospital at Key West, and wa later appointed to represent the Medical Corps of the Navy a the Paris Exposition. His remains were interred at Peoria, Il

JOSEPH EDGAR ARROWSMITH, M.D., died in Keyport, N. J January 3, aged 77 years. He was born near Middletow N. J., and after his graduation from the New York Universit Medical College, in 1844, he settled at once in Keyport, whe he remained in active practice until his retirement not man years ago. During the Civil War he was a widely know medical examiner.

L. LEO MINGLE, M.D., Reading, Pa., died January 9. Th Doctor was born in 1839, attended Jefferson Medical Colleg and Long Island Hospital Medical College, graduating from th former in 1866. During the latter part of the Civil War h served in the emergency service, in Company G, 48th Regiment Pa. Vol. Inf.

W. C. MCFETRIDGE, M.D., Philadelphia, died January 3, age 35 years. He was a graduate of the medical department of th University of Pennsylvania, class of 1886, and was a membe of the Philadelphia County Medical Society and the Phila delphia Medical Club.

WM. R. HARNAN, M.D., New Orleans, La., aged 38 years and a graduate of the medical department of Tulane Univer sity, class of 1887, died the 27th ult. From 1892 to 1896 h was secretary of the Louisiana State Board of Health.

JOHN S. COOK, Hackettstown, N. J., aged 76 years, died Jan uary 1. He was a graduate of the medical department of th

iversity of Pennsylvania, class of 1850, and was president of New Jersey State Medical Society in 1879.

WILLIAM A. CANTRELL, M.D., Philadelphia, died January 7, d 58 years. He was a graduate of Jefferson Medical e, class of 1862, and later was surgeon in the United States my.

WICKLIFFE C. SMITH, M.D., Delphi, Ind., aged 48 years, was lled by a train on the 29th ult. During the recent war he ved as surgeon in the 161st volunteer infantry.

CHARLES W. INGRAHAM, M.D., Binghamton, N. Y., aged 29 rs, a graduate of the Medical College of the University of w York, class of 1892, died January 3.

J. B. KREIDER, M.D., Bucyrus, Ohio, died recently, aged 50 rs. He was a graduate of the medical department of the iversity of Pennsylvania, class of 1866.

W. C. HALL, M.D., Franklin, Ind., aged 69 years, died Christs evening. During the Civil War he served in the 82d diana and the 17th Ohio, being surgeon in the latter regint.

JOHN FRANCIS BOURNES, M.D., Norristown, Pa., a graduate the medical department of the University of Pennsylvania, d on the 21st ult., aged 89 years.

S. C. RICE, M.D., Disco, Ill., died on the 29th ult., from inries received from a flying bolt in an accident to a fodder tter.

JOHN M. TURNER, M.D., Gardiner, Me., aged 46 years, and a aduate of Dartmouth Medical College, class of 1881, died on e 24th ult.

EDWARD BATWELL, M.D., Ypsilanti, Mich., died the 27th ult., the age of 71. During the Civil War he served in the 14th chigan Infantry.

J. R. FINNEY, M.D., Elbowoods, N. D., for some years the ency physician at Fort Berthold, died on the 27th ult.

IRWIN R. FISHER, M.D., Harlingen, N. J., coroner of Somert County, was found dead the 31st ult.

P. H. GARRETSON, M.D., Peoria, Ill., a graduate of the St. uis Medical College, died at his home January 8.

GEORGE R. HALL, M.D., Brush Hill Road, Mass., a graduate Harvard Medical College, class of 1842, died Dec. 24, 1899, d 78 years.

CHARLES KINGSLEY, M.D., Marlboro, Mass., aged 30 years, d the 29th ult. He was a graduate of Jefferson Medical Colge, Philadelphia.

S. F. BOWERS, M.D., Fond-du-lac, Wis., an ex-mayor of that wn, died January 2, aged 63 years.

JOHN H. COKER, M.D., New Orleans, La., said to be the first gro physician to practice in that city, died January 3.

We note also the following deaths:

OTHO AUSTIN, M.D., Oakridge, Miss., January 9.

JOHN CLARK CLEARY, M.D., died at Port Chester, N. Y., Janry 14, aged 31 years.

R. M. TUCKER, M.D., Helena, Ala., January 3.

Association News.

Committee on Pathologic Exhibit.—The following unficial committee on the pathologic exhibit has been appointed. r. Joseph Stokes, Moorestown, N. J., chairman; Dr. Alfred engel, Philadelphia, and Dr. Frank B. Wynn, Indianapolis, d., secretary.

Section on Physiology and Dietetics.—The officers of this ction request such members of the ASSOCIATION as desire to ad papers or present specimens or matters of interest in the partment of physiology and dietetics, to make early applicaon for a place on the program. The meeting of the Section the last session was notable for the excellence of its original pers. It is expected that the Atlantic City meeting of this ction will be on the same high order as last year. The proram will be open until the middle of February. R. Harvey ook, Oxford, Ohio, is secretary.

Section on Ophthalmology.—The following is the preliminry program of the Section on Ophthalmology of the AMERICAN EDICAL ASSOCIATION, for the meeting at Atlantic City, N. J., ne 5-8, 1900:

TUESDAY, JUNE 5—AFTERNOON SESSION.

1. Address of Chairman. H. V. Würdemann, Milwaukee, Wis.

2. Treatment of Conical Cornea. *a.* Optical Therapeutics. Swan M. Burnett, Washington, D. C. *b.* Operations. Robert Sattler, Cincinnati, Ohio.

Discussion opened by Herman Knapp, New York City, F. C. Hotz, Chicago, Samuel D. Risley, Philadelphia (to be invited).

Volunteer Papers.

WEDNESDAY, JUNE 6—MORNING SESSION.

3. Exhibition of Specimens and New Instruments. *a.* A Double Trial Lens to Balance the Eyes in Presbyopia. Mark D. Stevenson, Akron, Ohio. *b.* Other Demonstrations.

Volunteer Papers.

AFTERNOON SESSION.

4. Relation of Ocular Diseases and Visual Defects to Vocations. *a.* What Amount of Visual Defect should Disqualify in Railroad and Steamship Service. Frank Allport, Chicago. *b.* Estimation of the Amount of Injury to the Business Capacity of the Individual from Partial or Complete Loss of Vision. Adolf Alt, St. Louis, Mo.

Discussion to be opened by Wm. Thompson, Philadelphia, and C. H. Williams, Boston.

THURSDAY, JUNE 7—MORNING SESSION.

5. Exhibition of Specimens and New Instruments. *a.* Demonstrations of Sections of an Unusual Intraocular Growth. Wilbur P. Marple, New York City. *b.* Other Demonstrations and Instruments.

Volunteer Papers.

AFTERNOON SESSION.

6. The Rational Use and Limitations of Therapeutic Measures Intended to Promote the Absorption of Exudates Within the Eyeball. *a.* Medicinal Measures. Randolph Brunson, Hot Springs, Ark. *b.* Local Therapeutics. M. Uribe Troncoso. Mexico City, Mex. *c.* Present Status and Value of Massage of the Eyeball with the Consideration, What Diseases of the Eye May Be Favorably Influenced by this Therapeutic Measure and What Are the Best Means of Its Application. Casey A. Wood, Chicago.

Discussion opened by Geo. M. Gould, Philadelphia; Robert L. Randolph, Baltimore, Md., and J. Santos Fernandez, Havana, Cuba. Volunteer Papers.

FRIDAY, JUNE 8—MORNING SESSION.

Exhibition of Specimens and New Instruments.

7. Treatment of Immature Cataract with Special Reference to the Rate of Development and Such Measures as May Check It. G. E. deSchweinitz, Philadelphia.

Discussion opened by John E. Weeks, New York City, and Abner W. Calhoun, Atlanta, Ga.

AFTERNOON SESSION.

Volunteer Papers.

Titles of Volunteer Papers Accepted to Date.

1. Secondary Operations on Capsular Membranes. Peter A. Callan, New York City.

2. Lessons Learned from a First Series of 100 Cataract Extractions. F. T. Rogers, Providence, R. I.

3. Glioma of the Retina. G. A. Sulzer, Portsmouth, N. H.

4. Hemorrhagic Glaucoma. W. C. Posey, Philadelphia.

5. Will Relate to Variations in the Size of the Pupil. Lucien Howe, Buffalo, N. Y.

6. Paresis of External Recti Associated with Irregular Tabes. G. Oram Ring, Philadelphia.

7. Effects on the Eye of Flashes of Electric Light. Dunbar Roy, Atlanta, Ga.

8. Keratitis-Bullosa with Report of Case. E. O. Sisson, Keokuk, Iowa.

The officers of the Section request all ophthalmologists who intend contributing to the scientific program of the Section, by papers, exhibition of instruments or specimens, and all who purpose attendance on the meeting, to write at once, in order that places on the program, and hotel accommodations, may be reserved, and that an estimate of the probable attendance may be made at an early date. In regard to the program, address the secretary, Dr. Chas. F. Clark, 188 E. State St., Columbus, Ohio. For reservation of rooms, apply to the Chairman of the Committee on Arrangements, Dr. Philip Marvel, Atlantic City, N. J.

Book Notices.

THE SURGICAL DISEASES OF THE GENITO-URINARY TRACT, VENEREAL AND SEXUAL DISEASES. A Text-book for Students and Practitioners. By G. Frank Lydston, M.D., Professor of the Surgical Diseases of the Genito-Urinary Organs and Syphiology in the Medical Department of the State University of Illinois; Professor of Criminal Anthropology in the Kent College of Law; Surgeon-in-chief of the Genito-Urinary Department of the West Side Dispensary; Fellow of the Chicago Academy of Medicine; Fellow of the American Academy of Political and Social Science; Delegate from the United States to the International Congress for the Prevention of Syphilis and the Venereal Diseases, held at Brussels, Belgium, Sept. 5, 1899, etc. Illustrated with 233 engravings. Pages xvi—1024. Extra cloth, $5.00, net; sheep or half russia, $5.75, net. Philadelphia: The F. A. Davis Co., 1899.

"I have embraced the opportunity herein afforded me for airing a few heresies of my own," is the way the author puts it in his preface. But a hasty reading of his book fails to reveal any of these heresies. His views on certain subjects might have been considered radical at one time, but to-day, as expressed in the book before us, they will be generally indorsed as being in accord with modern practice and thought.

The first chapter, on "Genito-Urinary and Sexual Hygiene," covers the whole subject from normal urine to "sexual starvation"—and beyond. The author, in this chapter, takes the opportunity to give his views on a variety of questions relating to sexual hygiene, and these will be indorsed by most of his readers. He blames modern society for much of the sexual perversion of the day, and his views of marriage as a remedy for certain sexual troubles can be realized from the sentence: "Pure women should not be considered as remedial agents to be prescribed solely with regard to the interests of the consumer." Following this chapter there are four on the urine, in which are discussed uranalysis in its relation to surgery, hematuria, the relation of bacteria to genito-urinary infections, fevers associated with operations on, and disease or injury of, the genito-urinary organs. Two chapters are devoted to the anatomy and physiology, anomalous formations, and diseases of the penis. Diseases of the urethra, including gonorrhea and stricture, occupy three long chapters. The author takes rather strong views regarding gonorrhea as being the cause of pelvic diseases in women. "When freed from pathologic and anatomic errors, pelvic diseases are found to be dependent, in the majority of cases, if not all, upon tubal disease, and tubal disease is unquestionably almost always due to gonorrhea, and its congeners and derivatives." "Almost" is sometimes a handy word. Lydston quotes Nöeggrath, evidently with approval, when he alleges that eight out of every ten men have had gonorrhea. If this is true, then the "almost" is apropos. But is it true?

In Part V, consisting of seven chapters, the author gives us a brief, but classic, description of syphilis, including treatment. While believing in the germ origin of the disease, he does not regard the claims of Lustgarten as yet proved. Syphilis he thinks is a curable disease in a certain per cent. of cases, but he relies more on the judicious use of mercury and the iodids than on any of the newer remedies or combinations so persistently pushed forward. Six chapters are devoted to the diseases affecting sexual physiology. In that on "Diseases of the Sexual Function and Instinct," the author does not hesitate to express himself, though his views on some points may be considered a little radical. While believing that, from a sociologic standpoint, irrespective of arbitrary moral codes, monogamy is best adapted to our social necessities, he does not believe that it is in conformity with natural laws so far as the human race is concerned. The ultraconservative may not indorse this view, but all will agree with the following: "It is not so many years since such books, pictures, and plays as are tolerated to-day were tabooed. Latter-day art, literature, and stage furnish an atmosphere of sexual immorality, to which, sooner or later, every youth—male or female—is inevitably exposed. . . . Vice thinly veiled, or gilded over by the mawkish sentiment engendered by Trilby pink teas and yellow breakfasts, and apologized for by social faddists, is insidious and deadly." The foolishness of keeping the young in ignorance of sexual matters is emphasized, and the physician is rightfully blamed for his neglectfulness in this regard. Quack literature too often sounds the first warning the young man receives; but while the quack overdraws the evil, from purely mercenary motives, respectable physicians are inclined to the other extreme, and ignore the subject or pass it over as a matter of trivial importance.

The diseases of the prostate and seminal vesicles occupy five chapters, and four are devoted to diseases of the bladder. The chapter on urinary calculus is well illustrated, and the various operations given. Surgical affections of the kidneys and ureters are covered in three chapters. It would seem that now the kidney has assumed such an important place in surgery, the important operations on that organ might be left to works on that subject. The author has seen fit, however, to describe these operations more or less fully. The last five chapters of the book are on the diseases of the testis and spermatic cord.

On the whole the author has given us a reliable, comprehensive and practical text-book, and it will be a welcome addition to the special works on the subject treated. There is little to criticize, much to commend. It would not have detracted from its value if some of the padding in the way of reports of cases had been omitted. They are a useless encumbrance in the majority of instances, and this remark is not intended to be applied to the work before us only. Lydston's style of writing is a happy one, and it will not be surprising if the reader finds himself reading chapter after chapter when he intended to look up but a single point.

ENCYCLOPEDIA MEDICA. Under the general direction of Chalmers Watson, M.B., M.R.C.P.E. In twelve volumes. Vol. I. Abdomen to Bone. Price, $6 per volume. New York: Longmans, Green & Co. 1899.

The first volume of this pretentious, unique, and important work is before us, and the impression one receives in examining this initial number is that the work when completed will be one of the most valuable publications of its nature that has been attempted in many years, completely covering, as it does, the whole range of medicine and surgery. For this reason it would seem that the title is hardly a correct one, unless it be understood that the word "Medica" is to be used in its old and broad sense. It is an attempt to furnish an authoritative medical and surgical work complete in itself, concise, practical, modern and in such a manner that it can be easily referred to. As a rule, these large, many-volume works are not an advisable investment, for the reason that much money is locked up in a single work, which, in the rapid changes and progress of the day, soon becomes old. The publishers evidently appreciate this for they propose to keep it up to date by the issue, from time to time, at a small cost, of supplemented volumes, and with them gummed notes to be pasted on the margins opposite the articles affected. The first volume contains about 580 pages and includes subjects from "Abdomen" to "Bone." Many of the subjects are quite elaborately covered, although not more so than is necessary. The book is an English production, the contributors including the best writers of the profession in Great Britain. The subjects contained in this first volume are all treated in such a manner that a complete review of the knowledge of them is given, but in such a condensed way that space is economized without sacrificing the value of the article. At the end of each contribution which calls for such, a bibliography is given, which will aid those interested in getting the information necessary to a more complete investigation of the subject.

RECOLLECTIONS OF A REBEL SURGEON (and other stories) or in the Doctors' Sappy Days. By F. E. Daniels, M.D. Illustrated. Price, $1.10. Austin, Texas: Von Boeckmann-Schutze & Company. 1899.

Through words spoken by an old Confederate surgeon, who is a myth, into a modern phonograph, which is also a myth, the editor of the *Texas Medical Journal* tells a lot of good stories in a capital manner. Many of these are of the old time "befo' and durin' the wah," when the doctor was in his "sappy" days. They tell of surgery and surgeons before the words "antiseptic" or "aseptic" were heard of. Most of the stories are full of humor, many of pathos, and a very few are positively

. But all are good. They will make an excellent remedy an attack of the blues. When one is tired and weary of , two or three of these stories, taken on a full stomach— too full—will remove that "tired feeling" immediately.

TEXT-BOOK OF DISEASES OF WOMEN. By Charles B. Penrose, M.D., Ph.D., Professor of Gynecology in the University of Pennsylvania; Surgeon to the Gynecean Hospital, Philadelphia. Illustrated. Third Edition, Revised. Price, $3.50, net. Philadelphia: W. B. Saunders. 1900.

In the third edition of his book, which is slightly enlarged, nrose has brought every subject up to date. It has proved be one of the best works on the diseases of women for the neral practitioner, in that minor gynecology is thoroughly vered and the needs of the non-specialists recognized. The strations are many, excellent, and useful, and the book as whole is worthy of the highest commendation as a practical rking guide, in a condensed form.

THE SCHOTT METHODS OF TREATMENT OF CHRONIC DISEASES OF THE HEART, WITH AN ACCOUNT OF THE NAUHEIM BATHS AND OF THE THERAPEUTIC EXERCISES. By W. Bezly Thorne, M.D., M.R.C.P. Illustrated. Third Edition. Philadelphia: P. Blakiston's Son & Co. 1899.

In this third edition, Dr. Bezley Thorne's little volume has en rearranged and two chapters added. One of these deals pecially with conditions that should influence and modify the tail of the procedures, while the other gives instances of their plication in various cardiac conditions, illustrated by sphygographic tracings. Though the work is small, it has the adntage of a quite complete index.

Miscellany.

Dispensary-Abuse.—That the lay public has begun to real- the evils and the injustice of the dispensary-abuse is inated by the following language that appears in the fortieth nual report of the German Hospital, Philadelphia, for the ar 1899: "The abuses in the dispensaries continue, and are t only on the increase, but combined with insolence and arronce of some of the applicants for help, who imagine that the y authorities furnish the means to support free dispensaries."

Not Counted Among the Able-Bodied.—The supreme urt of North Carolina has decided that a statutory requirent of all able-bodied male persons between certain ages to ork on the public roads is not a tax, but a duty, similar to rvice on the jury, in the militia, etc., and, being a duty, it lds, in State vs. Covington, that sickness causing inability perform it is a full defense, as in the case of the other duties ich the state may exact.

Metschnikoff's Cell Serum.—In one of the last *Annales de Institut Pasteur*, Metschnikoff announced the important fact at he has established that the mononuclear leucocytes or acrophages swallow *living* cells. He reported an interesting search which showed that these macrophages, in guinea-pigs, allowed live spermatozoa, blood-corpuscles from the goose, c., the tail of the spermatozoon still keeping up lively motion ntil it was also absorbed. The macrophages then soon left e peritoneal cavity, where the live cells had been injected, d passed into the omentum, lymphatic ganglia, spleen and ver, and thence into the blood, where they induced the proction of a powerful and rapid cell-destroying substance ecific for the leucocytes of the animal from which they were iginally derived—spleens from rats, abdominal lymph glands om rabbits injected subcutaneously, etc. This agglutinating d hemolytic substance may be a product excreted by the acrophages at the close of their intracellular digestion. It as impossible, however, to produce an antileucocytic serum at would confine its action exclusively to the mononuclears. ey were first affected, beoming transformed into transparent sicles; the polynuclears then underwent the same transfor- ation, and lastly the Mastzellen in their turn. The fact that e macrophages can devour living cells suggests that they play important part in cellular atrophy. In atrophying morbid nditions of some of the vital organs, nerve centers, kidneys, liver, an accumulation of mononuclear phagocytes is noted, which become transformed into connective tissue, replacing the nobler element as the macrophages swallow everything in their reach incapable of defending itself against their voracity. This leads to the hypothesis that the cells must normally produce a certain substance which protects them against the macrophages. It is easy to conceive, therefore, that the cells of useless rudimentary organs may be able to defend themselves against the macrophages by this means, while others, really indispensable to the organism, may for some reason become deprived of this protecting substance and fall a prey to the macrophages. "We are justified in anticipating the day when medical art will actively and successfully intervene to maintain the integrity of the organism whose harmony has been disturbed by the preponderance of certain cellular elements such as the macrophages in atrophy, and various other elements in neoplastic affections." An antileucocyte serum or leucocidin which would restrict its action to a certain class of leucocytes would accomplish this. The problem can be solved in another way: by stimulating the nobler elements, the nerve cells, liver cells, etc., to spontaneously produce the protecting substance that defends them against the macrophages in youth and health. Metschnikoff is conducting special research in this line, and the announcements of the lay press that he has succeeded in producing a "long life serum" are founded on this research—which as yet is merely tentative. He concludes a recent article in the *Année Biologique* with the statement: "If the lost balance between the cellular elements could be re-established, then senile atrophy and certain other morbid changes would be arrested or attenuated. Old age would become more bearable, and the instinct of death, which is now usually lacking, would develop freely. Man has other resources than "natural selection" to assist development, and encouraged by the fact that human art has already surpassed Nature in the harmony of sounds, science should strive to establish harmony beyond what nature has accomplished, in the functions of the organism."

Queries and Minor Notes.

MEDICAL FACILITIES ABROAD.

SOUTH BOSTON, VA., Jan. 12, 1900.

To the Editor: Having decided to spend a part of the spring, summer, and fall in Paris, London, and Berlin, I would thank you very much for any information or literature bearing on the facilities, advantages, etc., of the various medical institutions, also of the various medical conventions that may meet during the spring or summer in any one of the above-mentioned cities, to which I might have access.—B. C. K.

ANSWER.—A book was published some years ago by Dr. Henry Hun, of Albany, N. Y., especially for Americans who wished to study medicine in Europe, but we think that it is now out of print. We know of no other work specially devoted to the subject. The following congresses are to be held in Paris this year: The Thirteenth International Medical Congress, August 2 to 9; Fourth International Congress of Dermatology, same date; Tenth International Congress of Hygiene and Demography, August 10 to 17; International Congress of Hypnotism, August 12 to 15; First International Congress of the Medical Press, July 26; and First International Congress of Medical Ethics, etc., July 23 to 28. The British Medical Association meets at Ipswich the first week in August. There are others of which we have not at hand the exact dates and places of session, such as the German Congress of Internal Medicine and Surgery, etc. There are facilities for clinical and other studies in all the larger cities of Europe. In London, in the Medical Graduates' College and Polyclinic, 22 Chenies Street, Gower Street, W. C., and in a similar institution in Edinburgh, will be found facilities for post-graduate work, although nothing in Europe will equal the post-graduate schools in this country.

JOURNALS ON GASTRO-INTESTINAL DISEASES.

TRACY, MINN., Jan. 8, 1900.

To the Editor.—What is the best German journal on gastro-intestinal diseases and on general internal medicine, and the best one in French on the same subjects? Yours very truly, C. J. B.

ANSWER.—If a general résumé of the literature of inner medicine is wanted, the *Centralblatt fur Innere Medizin* (Leipsic), which gives the abstracts of the leading German and Continental papers as they appear, would probably give the best satisfaction. The leading German journals on general medicine are probably the *Wochenschrifts*, of Berlin, Vienna and Munich. There are also high-class publications that appear at regular intervals and contain elaborate memoirs, but these are probably not what is wanted. It is still harder to name the leading French publications on these two subjects. One of the leading Paris weeklies, the *Presse Medicale*, the *Gazette des Hopitaux*, the *Journal des Connaissances Medicales*, the *Progres Medicale*, etc., might possibly do, or for a monthly, the *Archives Generales de Medicine*. We do not at present recall any journal in either language specially devoted to gastro-intestinal diseases.

WHOSE CASE IS IT?

RUSTON, LA., Jan. 9, 1900.

To the Editor.—Suppose a man, a recent resident of a community, sends for a physician who is out at the time of the call, but, word being left at his residence to go as soon as he comes in, the physician finds, on reaching the patient, that a second one has been sent for on the return of the messenger, and that physician No. 2 has visited and prescribed for the patient, and has, a few minutes previous to the arrival of the first, retired. What is the duty of these physicians to the patient; and to each other? Who should take charge of the patient?

R. F. H.

ANSWER.—"It often happens in a case of sudden illness . . . that a number of physicians are simultaneously sent for. Under these circumstances courtesy should assign the patient to the first who arrives. . . . In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should assign the case to the latter on his arrival."—*Code of Ethics.* When, as in this case, where the patient apparently has no family physician, the first physician has prescribed, and retired, there would seem to be nothing further for the second to do. His further relations to the case would seem to cease, unless he is particularly requested by the patient and his family to act, and then, under the circumstances, it would be necessary for him to see the first prescriber as to the treatment initiated, and to have a mutual understanding with him and the family before he takes charge of the case. In such an event the second comer ought to carefully avoid any line of conduct that might influence that patient and his friends to think that he expects to have further professional relations with them. If this course is honestly followed, there ought to be no chance of professional friction or ill feeling between the physicians called. Certainly there should be none if, with all courtesy, the facts are clearly stated and understood. A physician called, whether his services are requested or not, is entitled to remuneration for the time and trouble, and should send in his bill.

The Public Service.

PRECAUTIONS AGAINST PLAGUE.

AT HONOLULU.

Major Blair D. Taylor, surgeon U. S. A., under date of Dec. 15, 1899, has reported to the surgeon-general the occurrence of bubonic plague in the Chinese quarter of Honolulu. Orders were issued by the commanding officer of the military post, Camp McKinley, suspending the pass list, defining the limits to which the men were to be restricted, and prohibiting all men, employees and servants of the command from entering the city, except when on duty or by special written permission from proper authority. The following was published by Major Taylor for the information and guidance of the command:

"Bubonic plague is an acute, infectious and more or less contagious disease caused by a specific microbe. It can be carried in clothing, food or drink, and is easily inoculable through cuts, wounds or abrasions of the surface. It is propagated and disseminated by rats, mice, dogs and other domestic animals, as also by flies and vermin. It spreads rapidly in the presence of filth, overcrowding, poor food and unhygienic surroundings, but very slowly where there exists good ventilation, cleanliness and sunlight. One of the most characteristic symptoms is the early infection of the glands of the inside of the thigh just below the groin. The glands of the armpit are also generally involved. The specific microbe of this disease is easily destroyed by 1 to 1000 bichlorid of mercury, by milk of lime, by boiling water, steam, sunlight and formaldehyde gas. Quarantine is of little avail, as disease spreads in spite of it, in filthy and foul localities. The complete isolation of the affected localities, their thorough disinfection, and the burning of all objects and articles suspected of infection constitute our weapons for stamping out this disease. For personal prevention: Keep away from an infected locality and avoid those who are known to have been there; be careful to cover and protect all abrasions or cuts of the skin as soon as noticed; wash the hands, face and mouth always before eating; drink nothing but boiled water and eat nothing but clean food; sleep in airy, well-ventilated apartments as far from the ground as possible, preferably on the second floor; see that all the surroundings of yourself and dwelling are strictly clean and sanitary.

By following these directions there will be little danger of acquiring this disease, although living in its midst."

ON AN ARMY TRANSPORT.

On Dec. 12, 1899, as the transport *Warren*, carrying two batallions of the 49th U. S. Vol. Infantry, was about to sail from Honolulu for Manila, it was officially announced that three deaths from bubonic plague had recently occurred in the city. Many of the soldiers had been ashore during the two days of the transport's stay in the harbor and they had mingled freely with the natives. This suggested the possibility of some of them having become infected and the consequent necessity of taking every precaution to avoid an outbreak of the disease on a vessel so crowded with troops while en route across the Pacific. It was therefore decided to drop anchor four miles from the city and remain in quarantine for five days to await developments. A formaledhyde generator was obtained from the city authorities for use in disinfecting the effects of the men. This was done systematically in one of the hatches while the men washed down their quarters with a 1-500 solution of mercuric chlorid and then took a shower bath before recovering their effects from the disinfecting chamber and resuming their clothing. No communication was permitted with the shore, except such as was absolutely necessary, and then only by members of the medical department. Major Thomas E. Evins, surgeon, was in medical charge of the troops, with Acting Asst.-Surgeon G. W. Daywalt, surgeon of the transport. The *Warren* arrived at Manila, all well, on January 2.

ARMY CHANGES.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., Dec. 29, 1899, Jan. 5, 1900, inclusive.

Allen J. Black, acting asst.-surgeon, from East Radford, Va., to Fort Slocum, N. Y., to accompany recruits on the transport *Sumner* to Manila, P. I., where he will report for duty in the Department of the Pacific.

Carl R. Darneli, lieutenant and asst.-surgeon, U. S. A., leave of absence extended.

Louis L. Gilman, acting asst.-surgeon, from Rochester, N. Y., to Fort Slocum, N. Y., to accompany recruits on the transport *Sumner* to Manila, where he will report for duty in the Department of the Pacific.

William S. Kidd, acting asst.-surgeon, from New York City to the Department of California.

Patrick H. McAndrews, acting asst.-surgeon, from the Department of Porto Rico to report at Fort Slocum, N. Y., to accompany recruits on the *Sumner* to Manila and to report for duty in the Department of the Pacific.

Allen D. McLean, acting asst.-surgeon, from Fort Wayne, Mich., to the Department of California.

Edward R. Morris, major and surgeon, Vols., (captain and asst.-surgeon, U. S. A.) honorably discharged from the volunteer service on tender of his resignation, to take effect December 31, 1899.

Frederick P. Reynolds, captain and asst.-surgeon, U. S. A., previous orders amended so as to direct him to report at Fort Slocum, N. Y., to accompany recruits to Manila.

Robert A. Seale, acting asst.-surgeon, from Holly Springs, Miss., to the Department of California.

Bert Smith, acting asst.-surgeon, leave of absence extended.

Louis L. Stueber, acting asst.-surgeon, from Lima, Ohio, to the Department of California.

John W. Thomas, acting asst.-surgeon, from Fort McPherson, Ga., to Washington, D. C., for annulment of contract.

NAVY CHANGES.

Changes in the Medical Corps of the U. S. Navy for the week ending Jan. 6, 1900.

P. A. Surgeon A. W. Dunbar, ordered to duty on the *Monongahela*, immediately.

P. A. Surgeon R. K. Smith, detached from the naval hospital, Mare Island, Cal., on reporting of relief and ordered to duty on the *Pensacola*.

Asst.-Surgeon J. H. Payne, detached from the *Indiana* and ordered to duty at the naval hospital, Mare Island, Cal.

Medical Director A. F. Price, promoted to medical director from April 9, 1899.

Surgeon G. M. Pickrell, promoted to surgeon from Sept. 19, 1899.

Asst.-Surgeon R. Spear, ordered to duty in connection with the naval recruiting rendezvous, Philadelphia, Pa., January 9.

Pharmacist I. N. Hurd, ordered to duty at the Key West naval station, January 11.

MARINE-HOSPITAL CHANGES.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital Service for the seven days ended Jan. 4, 1900.

Surgeon W. P. McIntosh, to proceed to Columbia, Tenn., for special temporary duty.

P. A. Surgeon J. C. Perry, to proceed to Manila, Philippine Islands, for temporary duty.

Asst.-Surgeon L. D. Fricks, assigned to duty as assistant to the Director of the Hygienic Laboratory, Washington, D. C.

Asst.-Surgeon Dunlop Moore, relieved from duty at San Francisco, Cal., and directed to proceed to Portland, Ore., and assume command of the Service.

Asst.-Surgeon D. H. Currie, relieved from duty at Louisville, Ky., and directed to proceed to Washington, D. C., and report to the Director of the Hygienic Laboratory for temporary duty.

HEALTH REPORTS.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Jan. 5, 1900.

SMALLPOX—UNITED STATES.

District of Columbia: Washington, Dec. 28, 5 cases.

Illinois: Cairo, Dec. 23 to 30, 12 cases.

Indian Territory: Choctaw Nation, Dec. 18, 80 cases in mining camps.

Louisiana: New Orleans, Dec. 16 to 30, 21 cases; Shreveport, Dec. 16 to 30, 9 cases.

Massachusetts: Chelsea, December 16 to 30, 1 death; Lowell, December 23 to 30, 1 death.

Nebraska: Omaha, December 23 to 30, 1 case.

New York: Amsterdam, December 16 to 31, 1 case; New York, December 16 to 23, 1 case.

Ohio: Cincinnati, December 22 to 29, 1 case; Cleveland, December 16 to 30, 4 cases.

Pennsylvania: Allegheny, December 16 to 23, 3 cases; Pittsburg, December 16 to 30, 2 cases.

South Carolina: Greenville, December 7 to 30, 4 cases.

Tennessee: Nashville, December 23 to 30, 2 cases.

Utah: Salt Lake City, December 16 to 23, 1 case.

Virginia: Portsmouth, December 23 to 30, 10 cases, 2 deaths.

SMALLPOX—FOREIGN.

Belgium: Antwerp, December 2 to 9, 5 cases, 3 deaths.

Brazil: Rio de Janeiro, November 3 to 17, 111 deaths.

Gibraltar: December 2 to 17, 3 cases, 1 death.

Greece: Athens, December 2 to 9, 5 cases, 1 death.

India: Bombay, November 21 to 28, 14 deaths.

Russia: Moscow, November 25 to December 2, 1 case; Odessa, December 2 to 9, 3 cases, 1 death; Warsaw, November 25 to December 2, 8 deaths.

Spain: Madrid, December 2 to 9, 7 deaths.

Turkey: Smyrna, December 3 to 10, 1 death.

YELLOW FEVER—FOREIGN.

Brazil: Rio de Janeiro, November 2 to 17, 6 deaths.

Colombia: Panama, December 19 to 26, 1 case.

Cuba: Matanzas, December 29, 1 soldier.

PLAGUE.

Hawaii: Honolulu, December 11 to 18, 2 cases, 2 deaths.

India: Bombay, November 21 to 28, 137 deaths; Calcutta, November 4 to 18, 77 deaths; Kurrachee, November 18 to 25, 3 cases, 1 death.

CHOLERA.

India: Bombay, November 21 to 28, 4 deaths; Calcutta, November 4 to 18, 25 deaths.